

AMERICAN AGRICULTURIST,

FOR THE

Farm, Garden, and Household.

"AGRICULTURE IS THE MOST HEALTHFUL, MOST USEFUL, AND MOST NOBLE EMPLOYMENT OF MAN."—WASHINGTON.

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June.

At leisure now, O let me once again,
Once, ere I leave the cultivated fields,
My favorite Patty, in her dairy's pride,
Revisit; and the generous steeds which grace
The pastures of her swain, well pleased survey.
The lowing kine, seen at their 'customed hour,
Wait the returning pail. The rosy maids,
Crouching beneath their sides, in copious streams
Exhaust the swelling udder. Vessels large
And broad, by the sweet hand of neatness cleaned,
Meanwhile, in decent order ranged, appear,
The milky treasure, strained through filtering lawn,
Intended to receive." DODSLEY.

There is a charm about old English poetry, to be found in the literature of no other nation. It is as dewy and fragrant as one of these June mornings, full of rural sights and sounds. What can be more delightful than the fields, now that the lingering Spring is gone, and the Summer has begun its work in good earnest? The grass is luxuriant, and the butter-cups and dandelions are unfolding their golden blossoms. The dew stands in beaded drops upon the green spires, and sweet odors are wafted on every breeze. The song of birds is never so sweet as at the morning hour, when every sense awakes with new life from sleep, and field and forest put on

new robes of beauty, to hail the morning sun.

Our illustration introduces us to the raw material of June butter, which is famous wherever butter is known at all. No month equals this in the quantity and quality of this article. The grasses are now luxuriant, and the cows have full feed. They are also, some of them, in blossom, and something of the aroma and perfume is thought to be transmitted to the butter. However this may be, the fact is not disputed. The scene is perfectly English, the character of the landscape, the maid at the milk-pail, and the swain at the bars. This part of the picture would be reversed in this country. We are too tender of our women to allow them a place in the milking yard. While almost all English and Irish men who come over to us are unused to milking, Ann and Bridget are as certain to understand the care of the cow, and her milk, as they are to hail from the cottage and the farm. On the other hand, our Yankee boys upon the farm are invariably trained to the milk-pail, from their earliest days. Who that hails from the farm, does not remember this as a part of his early discipline? As soon as he had strength enough to milk rapidly, he was put to his task, and carefully instructed, probably by his father, in this wise. "Be very gentle with the heifer, John; no loud talking or scolding in the yard. Use the stool for a seat, and not to beat the cow. After cleaning her bag, milk as fast as you can until the last drop is drawn." Milking was a part of his daily duty, in Summer, from the age of ten till he quit the farm. He remembers the early call from bed, his twilight visits to the farm yard, his driving the cows to pasture before sunrise, his numerous pauses by the wayside to hear the song of the robin, or the black bird, his admiration of the apple blossoms, and the bees that made honey and music in the fragrant branches, his eager inspection of the blue and speckled eggs in the bird's nests, his bringing home the cows at night with weary footsteps, after the other farm labors were done. All these are familiar memories with our boys and men, but how very few of our women, of the present generation, know anything of the duties of the dairy outside of the milk-room. In the present rage for out-door amusements for our girls and ladies, it is not impossible that this once fashionable out-door work for women may come round again. We do not, however, think it desirable. We sympathize with the common orthodox notion that "the barn-yard is no place for woman." It is doubtless one of the rights of women to take care of the milk, and to make the butter and cheese.

The dairy is one of the most important of all our farm interests, and as a dairy State, New-York stands at the head of the list. The seventh census shows 818,000,000 pounds of butter, and 105,000,000 pounds of cheese made in the country, in a single year, worth at least \$100,000,000

Nearly one-fourth of the butter, and one-half of the cheese, was made in New-York. The last census, doubtless, will show a great increase of these products, and a much smaller proportion in this State. Vast regions of grazing country in the new States have been opened, and we trust that statistics will show that in some of the old States, the long neglected pastures have begun to improve.

No part of the farm has been abused so persistently, as the pasture. While the tilled fields have had manure, and many of them have been well cared for, the pastures have, in most cases, had nothing returned to them. There are many fields now, in the old States, that have never been plowed, and never received an ounce of manure beyond that dropped by cattle while feeding. They have occasionally had the bushes cut, and this is about all the care they have received for a century. Every year the fertility has been carried off in the shape of milk, butter, cheese, beef, and mutton, until the pastures are almost barren. In many cases they will not keep a fourth part of the stock they once kept. It is thought strange that they can not make as much butter and cheese as formerly.

The proper treatment of pastures, so as to restore their fertility, is one of the most important topics that can be discussed in the dairy region. Many of these pastures are too rough and rocky to plow, and are too distant to be manured economically from the barn-yard.

We should in all cases, upon arable land, prefer to have pastures, as well as the meadows, plowed. All land does better with a rotation of crops. Where this is not practicable, we must resort to top-dressings, and limit the number of stock to the capacity of the land. Many of these pastures have been run down by over-stocking. They have had no chance to recuperate. Cattle are turned in, in early Spring, and they are kept in until the snow falls. The grass is gnawed so close that little or none is allowed to go to seed, and the roots grow weaker every year. Something may be done by reducing the stock.

Sheep husbandry, on high lands, has been found to restore the fertility of these worn out pastures. Sheep eat plants and shrubs that a cow will not touch. Some find great advantage from an annual sowing of plaster. Bone dust is another excellent remedy, more expensive at first, but much more durable. Ashes, where they can be had, prove an excellent and lasting manure. It is matter of great importance to make a beginning in this work of improvement. It is folly to expect that our pastures will maintain their fertility if we return nothing for the milk they yield us.

One of the first things to be done this month, is to look after the vacant spots. Note sundry hints on the subject in the Calendar, also on p. 167, and elsewhere.—[Note also the publisher's offers on pages 188, 189, and 192.]

Calendar of Operations for June, 1861.

[We note down sundry kinds of work to be done during the month, to call to mind the various operations to be attended to. A glance over a table like this will often suggest some piece of work that might otherwise be forgotten or neglected. Our remarks are more especially adapted to the latitudes of 38° to 45°; but will be equally applicable to points further North and South, by making due allowance for each degree of latitude, that is, earlier for the South, and later for the North.]

EXPLANATIONS.—*f* indicates the first; *m*, the middle; and *l*, the last of the month.—Doubling the letters thus: *ff*, or *mm*, or *ll*, gives particular emphasis to the period indicated.—Two letters placed together, as *fm* or *ml*, signify that the work may be done in either, or in both periods indicated; thus, work marked *fm*, indicates that it is to be attended to from the first to the middle of the month.]

Farm.

There is scarcely a more important agricultural month in the whole year, than June. It terminates the period in which most seeds can be sown, and introduces the indispensable work of cultivation. Many early sown or planted crops that have failed, may yet be replaced; if the whole available area be not already occupied with growing crops, now is the time to put in quick growing corn, beans, or other staples. The early planted corn, potatoes, and roots of all kinds, should receive immediate and careful attention, to free them from weeds, loosen the soil, top-dress with guano, ashes, or plaster, and thus secure their rapid growth. Vigorous growth in the earlier stages of a plant, is most likely to be followed by generous fruiting.

Cultivation of the soil may appear tame and uninteresting work in these exciting times, and the temptation will be great to leave peaceful fields for the field of conflict, but remember that feeding the country is as necessary, as fighting her battles, and that full garrisons can only be maintained by full granaries.

Barley will usually yield a fair crop, if sown at this season, although earlier sowing is preferable. It succeeds best on a gravelly soil, and may well occupy ground devoted to hoed crops last year. Sow two and a half to three bushels per acre, and harrow in thoroughly.

Barns and Sheds will soon be needed to receive the first fruits of the mowing grounds. Put platforms, bay-ways, etc., in order; clean out all rubbish, and repair floors and entrance ways, if needed. Examine grain bins, wool closets, and cattle stalls, and exterminate any vermin.

Beans—Plant, *ff*, where corn has failed, if seed of King Phillip, or other early variety, can not be had. They may also be put in on soil too light for corn. They do not require heavy manuring; too strong soil gives great growth of vine, without a corresponding yield. If the war continues long, beans will be in great demand; they furnish much nutriment in a small space. Plant them abundantly.

Beets—Mangel Wurzel and Sugar varieties, sown *ff, m*, will have plenty of time to mature for winter feeding. A great saving of grain and hay will be effected, by having a good supply of these and other roots, to feed out in Winter and Spring.

Butter, if properly made during this month, may be laid down and kept throughout the season, or until the best prices can be had. Cleanliness and thorough working are the two essential points to be observed. Keep the milk room cool, and free from dust, insects, and offensive smells. Churning the milk with the cream, after the latter has risen, saves the work of skimming, and some claim that more butter is obtained in this manner. Experiment to learn if this be true; note also the quality of the butter. In sending butter to market, be careful to have the cask or pail look neat and inviting, and plainly marked. New tubs should be well scalded with buttermilk before packing, to remove the taste of the wood.

Cabbages—Plant out for late crops, *m, l*. Hoe and cultivate between the rows of those previously set, at least once a week—the oftener the better. Set plants between the rows of early potatoes, which are to be dug, *ll*, or the first of July. Examine often to destroy cut worms and other insects.

Carrots—In favorable seasons large crops have been obtained, when sown the first week in June. Keep the rows well hoed, and thin to six inches apart. They may be drilled in between rows of onions after the second or third hoeing of the latter. If this be done, leave every third space vacant, to give room for curing the onions when pulled.

Cheese—Study to improve the quality, rather than to increase the quantity produced. "White-oak" cheeses are always a drug in market, while those of first class are always in demand at good prices. Valuable information on cheese making is given in a series of articles on the Dairy in the eighteenth volume of the *Agriculturist*.

Cattle—Young cattle, especially calves of the present season, need attention to keep them growing. Allow them the best pasture: read "Feed for Weaned Calves," page 173.

Corn—A good crop of the King Phillip variety may be obtained, if planted during the first week of June. Indeed, most kinds of corn, (except the very large sorts which require a long season for maturing,) may be planted during the first week in June. Some do all their planting as late as June 1. Soaking the seed in tar water, and rolling in plaster, and manuring in the hill with compost manure, bone dust, or Peruvian guano mixed with plenty of soil, will give the young shoots a strong and rapid start. Go through land already planted, with the cultivator and hoe, clear out all weeds and grass, thin the corn to four stalks in the hill, and replant missing hills. Sow and drill both common and sweet varieties for cutting green in August and September. Read "Sow Corn for Feeding," page 170.

Grain Fields will whiten to the harvest in southern localities, *ff*. Wheat or rye should be cut, as soon as the berry is advanced enough to bear moderate pressure of the thumb-nail, without breaking, or just after it leaves the "milk" stage.—Examine the fields for the earliest and best portions, to be left to ripen fully for seed. Read "Weed the Wheat fields," page 171.

Haying will begin, *ll*, in the earlier sections. Cut grass or clover for hay, just as the bloom is passing away, and the seed commences to form. If left later, much of the nourishing part of the stalk is hardened into woody fiber. Provide a supply of hay caps, to be used this season. They will enable you to cure much of the hay in the cock, which will give a better quality of fodder. A mowing machine and a horse pitchfork will pay on all farms, where there is much meadow.

Manure—Turn every source to account, as recommended in previous numbers. Throw weeds from the garden, etc., into the pig sty, and supply the swine with plenty of material, to work over at their leisure. Read "Home-made Bone Manure," on a subsequent page.

Millet—Sow, *ff, m*. Read "Millet for Fodder," p. 170.

Peas—Sow or plant, *ff*, if there be vacant ground. They make excellent food for swine, when fed green with the straw, or ripened and ground with oats, or when fed alone, cooked or soaked. Hogs will grow and partly fatten well on peas. The last few weeks' feeding should be on corn, to harden the pork.

Potatoes—Keep well hoed until blossoming. Hill them only moderately. Try top-dressing with ashes, to drive away insects, and to prevent rotting. See article on the "Potato Disease" in this paper.

Poultry—Accustom them to lay in their appropriate places, by confining them in the poultry yard until after noon. Allow none to set after the middle of this month. Give plenty of food, particularly to the growing broods, to fit them for an early market. Keep their apartments clean, and use the droppings, mixed with plaster, in the garden. They are also an excellent addition to liquid manure.

Sheep washing and shearing will need attention, *ff*. A vat constructed for the purpose, as described in Vol. XIX, page 136 (May No.), is a great convenience. Remove all tag locks, burdocks, thistles, etc., from the fleeces, before tying them up for market. Mark each sheep plainly as soon as sheared, and designate ewes having superior fleeces, with a

special mark, that they may be reserved for breeding. Dock and castrate lambs, if not already done, and guard against the fly by smearing wounds with tar. Look out for foot rot as directed in the May No.

Sorghum—Drill or sow broadcast for cutting and feeding green, or to be cured for winter fodder. Cultivate that already planted, the same as corn.

Swine—Keep them growing with wash from the dairy, mixed with ground feed. Allow them the range of the orchard, to destroy grubs and worms in unsound fruit. Suffer none to run in the highway. A good clover pasture will afford them excellent feed. They should be supplied with pure water.

Tanners' Bark—Peel from hemlock and oak, as soon as it will run freely, and pile it so as to protect from rain.

Tools, particularly for haying and harvesting, should all be in readiness before the season of use.

Weeds grow rapidly, if left during this month. Keep the cultivator and horse and hand hoes busy—clean tillage pays best.

Orchard and Nursery.

The professional nurseryman will find enough to occupy his time during this month, stirring the soil, keeping down weeds, pruning or heading back, removing suckers, transplanting evergreens, etc., but the farmer will find little leisure for the care of his orchard, which is too frequently neglected in the pressure of other business. If it is worth while to plant an orchard, it will pay to give it some attention. In vain is a crop of corn or potatoes expected without labor bestowed upon the field after planting. If the young orchard were properly pruned, the branches cut back and well shaped with a knife in June and July, no large branches would have to be removed subsequently, leaving a wound to cause premature decay. But if large limbs are to be removed from grown trees, which were neglected while young, June and July are the proper months to remove them. The foliage shades the wounds, and prevents sun-checking, and a healthy growth of new wood at once begins to roll over the cut. By no means leave a stub to be covered by this new growth, but cut close to the body with a fine saw, rather than with an ax. It is also advisable to coat the sawed space with a solution of gum shellac, dissolved in alcohol to the consistency of thick molasses, putting it on with a painter's brush. By all means, spare time enough to give the orchard its annual pruning now—it will abundantly pay. After a little practice, a glance will tell what branches should be removed, to form a well balanced and tolerably compact head, with few inside crossing limbs. Two extremes should be avoided. One is, the cutting out of all the central shoots, and encouraging a tall or wide-spread growth. This leaves the bearing portions high in air, where they are swayed and thrashed by high winds, with a long distance for the fruit to fall; it is also inconvenient to pick. The branches are often so spread with the weights upon their extremities, as to split them down. Again, with the pear especially, there is not sufficient shade upon the main branches and body of the tree. The other extreme is, heading back too strongly, and not cutting out the center sufficiently. We have seen the branches so thick and interwoven, that it was almost impossible to gather the fruit.

Stimulate the growth of both old and young trees in a poor soil, by a liberal coating of manure about the roots. Remember, that new wood and fruit spurs are wanted this year, to bear next season. Shortening in June, checks the flow of sap, and tends to the formation of fruit buds. A stout cord or strap, fastened around the body of a young tree, or the main branches of older ones, by compressing the sap vessels, tends to the same end, though this is not generally advisable, except in the case of persistent non-bearing of trees.

Evergreens may safely be transplanted early in June. Besides attending to this in the nursery, let the newly planted and exposed orchard have a belt set upon the sides most affected by the prevailing

winds. In prairie countries it may need a *thick* belt of both evergreen and deciduous trees, to break the winds. Native evergreens can be taken from the open grounds, where nursery grown trees can not be had. Directions for pruning evergreens will be found under "Flower Garden and Lawn." See article on evergreens, on page 178.

Grafts set this year, should now be examined. Loosen any strings cutting into the bark, replace clay or wax where needed; and rub off superfluous shoots, or suckers.

Budding is better done next month in this latitude; at the South it may be commenced. *U*. Remove suckers from trees budded last year, and keep the growing buds tied up, to prevent their being broken off by their own weight, or by the wind.

Hoeing—The plow, horse-hoe, or cultivator, will almost entirely do away with work by hand in the nursery row and the orchard. Avoid barking the trunks of the trees by passing too closely with the plow. Use the hand hoe to remove grass and weeds immediately about the trees.

Layering and Inarching may begin, *U*. Use new growth for layers, and old wood for Inarching.

Insects—Allow no caterpillars to remain entrenched in the trees. Pull their houses down early in the morning, or in the evening, while the occupants are at home. Especially watch for the curculio, as they begin their ravages almost as soon as the plums set. Dust trees with lime, syringe with oil soap, or jar the insects upon a sheet, spread under the trees. A combined effort at catching the "bugs," would soon depopulate a neighborhood. Give the chickens a range under both plum and cherry trees. Few insects will escape to trouble fruit. Cultivate the friendship of birds, allowing no marauding sportsman to fire a gun upon your premises. Keep the grass and weeds down about the trunks of young trees, else the borer moth will lay her eggs there. A newspaper tied around the tree, close to the ground, and for one foot or more above, will usually save the trees. If fearful that eggs are already there, wash the body with strong soap suds, or potash and water. The same wash will remove scale or "lice," which are now quite small, and easily rubbed off.

Mulching is beneficial on open soils, especially for newly planted trees, and in a drouth. Cover the whole ground, or as far as the roots spread, with straw, tan bark, saw-dust, or coarse manure. This is better than watering. Evergreens, especially, will be benefited by mulching.

Seed-Beds should receive careful attention. Remove weeds, and loosen the soil, thin or transplant where needed, and shade evergreens from hot sun.

Water newly planted trees, if very dry, and mulch, to retain the moisture and prevent the surface from crusting. Occasional thorough watering is better than frequent sprinkling.

Weeds will not be allowed a place in either well cultivated nursery or orchard.

Kitchen and Fruit Garden.

The rapid growth induced by the favoring weather usually experienced this month, may be yet more hastened by proper cultivation. Quick growth of all garden vegetables is particularly desirable, as the flavor is in most cases greatly superior to that of tardy plants. Keep down the weeds; keep the soil loose—these are the golden rules of gardening. While the dew is on in the morning, is the most favorable time for hoeing, excepting beans, and plants whose tender leaves would be injured by dirt adhering to them.

Asparagus—Discontinue cutting from the bed, *m*, where the gathering began early. Keep down all weeds, and allow the plants to grow—the feathery stalks will be an ornament to the garden.

Beans—Plant early varieties in vacant spots, *f*. Train running sorts to open trellises, which allow better exposure to the sun, than when the vines twine around poles.

Beets—Sow, *m*, *l*, for Fall and Winter use. If the ground becomes crusted after sowing, water the

rows at night, to allow the young plants to push their way through. Keep well hoed, and thin the plants early to eight inches apart.

Blackberries and Raspberries—Keep all canes, including new growth, properly trained to stakes or trellises. Allow only those shoots to remain, which are wanted for next year's bearing, except they are wanted to make new plots. If specimens of extra large fruit are desired, thin the clusters and berries, leaving only one or two clusters in a bunch.

Borecole, Broccoli, Brussels Sprouts, Kale, etc.—Transplant for late use, *f*, *m*.

Cabbage and Cauliflower—Sow seed, *f*, for latest transplanting. Set out, *f*, *m*, for Autumn, and, *U*, for Winter use. Hoe often, it can scarcely be done too frequently. Watch for insects and destroy them.

Carrots—Follow directions given under "Farm."

Celery—Prepare trenches—one foot wide, two feet deep, and four feet apart. Put in six inches of well rotted manure, and six inches of soil; mix thoroughly, and set the young plants, *m*, *l*. A clear, cool day is best. Water the plants before transplanting, and preserve the roots as unbroken as possible. Shade the trenches for a day or two, to keep from wilting, and water if very dry, applying it at evening.

Corn—Plant Stowell's Evergreen, or other sweet varieties, *f*, *m*, *l*, to keep up a succession for late use. Keep well hoed and free from weeds.

Cucumbers, Melons, and Squashes—Put in cucumbers for pickles, *m*, *l*. Occasional watering the vines with liquid manure, made by mixing fresh cow droppings, or hen manure with water, will repel insects, and rapidly forward the growth. The striped bugs may be easily taken early in the morning, while the dew is on, and destroyed. Examine the under side of the squash leaves for eggs of the squash bug. Hundreds may be destroyed before hatching. Leaves of the Ailantus tree are offensive to some insects; they must be replaced as often as dry.

Currants—Keep the bushes trained to good form by pinching off straggling shoots as they appear: this will save the necessity of further pruning, except to remove dead wood. Keep the ground around them loose, and free from weeds. Water the bushes with soap suds, and other wash from the house. Make jelly from the fruit, before it is dead ripe; for wine it is better fully matured.

Egg Plants—Transplant, *f*, for general crop, and, *m*, for late use. Give them a warm situation, and loose, rich soil. Read article on page 180.

Fruit Trees—Keep dwarf pears and other fruit trees trained to good shape, by pinching out superfluous shoots as they appear. Remove all but one or two specimens from trees transplanted this year, or last Fall. If cherries can not be marketed, preserve them in bottles, or remove pits and dry them.

Gooseberries—Cultivate and treat as directed for currants. Keep the surface of the ground moist by mulching. If large specimens of fruit are desired, leave a single berry on a shoot, and support it in a small bag of millinet tied to the branch.

Grapes—Proper care in pinching out unnecessary shoots, and shortening in too rampant growth, will obviate the necessity for severe cutting in the Fall, and the strength of the vine will be retained in the remaining canes. Leave only one bunch of fruit on a spur. Continue to watch against insects. Showering with whale oil soap, or other solutions, from the syringe or hydropult, will dislodge many. Others must be removed by hand.

Insects of some species infest and injure almost every variety of garden produce; they can be kept in subjection only by constant watchfulness. A crop of young chickens will do valuable service in exterminating them.

Lettuce—Sow in vacant corners at intervals of a week, to keep up a succession. Give plenty of room for Cabbage varieties to head. Hoe after the dew is off, and avoid throwing dirt upon the leaves.

Onions—Keep the plot entirely free from weeds, and the surface loose. Thin to four inches in the

row. A dressing of salt and ashes is recommended to expel the maggot of the onion fly.

Paraneps and Salsafy—Hoe and thin, *f*, the same as for beets and carrots.

Peas—Plant for general crop, *f*. Set bushes or trellises of stakes and twine for their support, at the time of planting.

Paths and Borders should be kept free from weeds, and leveled to proper shape. Keep the edges of beds properly squared, and let neatness be everywhere observed.

Potatoes may still be planted, *f*. Cultivate as directed under "Farm."

Radishes—Keep up a supply by scattering seeds at intervals in unoccupied spaces, between rows of young plants, hills of corn, melons, etc. Leave the best and earliest for seed.

Rhubarb—While the yield is abundant, cut and dry for Winter use; or stew them as for the table, and preserve in bottles. The season will be prolonged by removing the seed stalks.

Spinach—Sow, *f*, *m*, for continued supply. It may take the place of early lettuce, radishes, etc.

Strawberries—Remove all grass and weeds, and mulch the ground with tan bark or short straw, before picking commences. Keep the beds well watered while fruit is forming, if there be drouth.

Tomatoes—Transplant *f*, *m*, for late use. Support growing vines with brush or frames of lath. Shorten in the branches, to prevent rank bushy growth. Keep well hoed.

Transplant to fill vacant spots, or replace weak plants. It can be successfully done at any time while plants are young, provided directions given in last number be observed.

Turnips—Sow, *f*, *m*, for Summer and Autumn use. Sprinkle the young plants with a decoction of quassia, to drive away insects. Thin early, and hoe often.

Water is best applied to plants in the evening, or very early in the morning. Give as may be needed, particularly to plants lately set out.

Weeds are easiest destroyed when they first appear. Give them no quarter.

Winter Cherry—Sow, *f*, if not done. Transplant from former sowings; set the plants two feet apart, in good soil.

Flower Garden and Lawn.

June is emphatically a month of roses, and the common garden, hybrid perpetual, moss, monthly, climbing, tea and China sorts, vie with each other in form of flower, sweetness of perfume, or delicacy of coloring, and he who has a good collection is now rejoicing in the treasure.

Besides the roses, there are many other pleasing objects connected with the garden and lawn, especially if one has had a conservatory, green-house, or even hot-bed to draw from. The masses of bedding plants nearly hide the ground with their bloom, while single specimens of various sorts, here and there, break the monotony and relieve the eye. The plants, with variegated foliage, are especially interesting, and now that they are within the reach of large numbers, we commend the growing taste for this class.

This is a growing month, and weeds are rapidly coming to light. They would soon entirely overrun the delicate flowers, if left unchecked. With hoe, rake, and weeding knife, the gardener must commence and continue a war of extermination upon them. Nor is it sufficient to merely keep down weeds. The ground should be frequently stirred, or it will crust or bake upon the surface, shutting out air and dews from the roots, and turning away the rain which should penetrate the soil. A fine-toothed rake is a good implement for lightening the surface, and at the same time disturbing the weed seeds about sending up their shoots. Besides keeping down the weeds, there are many plants to be removed or thrown away; it is impossible to have healthy foliage and a fine bloom in crowded grounds.

If any vacant space is left, it may still be sown

with annuals and perennials. There is ample time for the latter to make sufficient growth for a free bloom the next season. The various bedding plants alluded to last month, may still be set out, *f*.

Box Edgings may also be set, *f*, *m*. Trim or shear old borders, *m*, *l*, on damp or cloudy days. Keep well hoed, and replace any unsightly or defective plants with those of thrifty growth.

Bulbs—Lift, *l*, those which have finished blooming, if needing to be reset in the Fall. Dry them in the shade, and put in boxes or pots of dry earth, or lay in drawers, or wrap in papers, carefully labeling.

Carnations and other Pinks—Keep well tied up while in bloom. By shading with a muslin screen during mid-day, the flowering season may be much prolonged. Layer, and make cuttings, *f*, *m*.

Climbers of all kinds should be kept well secured to stakes or trellises. Those to be laid down in the Fall, should not be allowed to twine in such a way that they can not be easily removed. Such should also be kept from passing and repassing through the meshes of wire or slat lattice work.

Dahlias bloom best in Autumn. We prefer keeping them back, and usually plant out some roots the latter part of June. Allow but one stalk to a root.

Evergreens may well be set out, *f*, *m*. Remove them with earth about the roots, when practicable, and water freely at the time of setting. Those set last month, will do better if watered during dry weather, and still better if well mulched. They may now be pruned with safety.

Flower Stalks—Cut away as fast as they are out of bloom. They have an unsightly appearance when left in the flower border. They should give place to the later growing annuals. Remove also the withered flower stems.

Grass Edgings, or Borders—The grass is now growing rapidly, and needs frequent clipping, and an occasional trimming or paring at the edges, to prevent its extending into the beds or paths. Good sorts of one kind of grass are far preferable to box for edgings or borders. Grass with running roots is not desirable.

Geraniums—Plant out, *f*, any remaining in pots. They mass finely, either in distinct colors, or when mixed.

Gravel Walks—Keep free from grass and weeds, raking and rolling frequently. Add fresh gravel to old paths. Hot water may some times be resorted to, to kill persistent grasses, when you have not time to use the hoe. If used it should not be allowed to run into the grass border while hot.

Hedges—Cut from the top, *m*, *l*, to thicken up the bottom. They may be cut to any desired form.

House Plants—Green-house, hot-house, and parlor plants have nearly all been transferred to these grounds, some of them for summer blooming, others to attain a flowering size by the time they are returned to the houses in the Fall. Some have been planted out, while others are plunged in the earth, and should be lifted, pot and all, and turned so as to separate any roots extending through the hole at the bottom. Pinch back freely, to form fine bushy plants.

Insects are now providing for future broods. Forestall their operations by destroying the parent stock. Scatter caustic lime over ant hills.

Lawn—Keep the grass in a fine thick mat by cutting often—at least every fortnight. Do not allow grass or weeds to grow about the trunks of small trees, particularly those newly planted. A circle of from three to six feet in diameter, with the trees at center, should be kept well hoed or raked over. Cut the turf smooth and even, in a true circle, and remove the earth around the edge for a few inches in depth, rounding it slightly about the trunk. To make it still more ornamental, a few verbenas, petunias, salvias, or other flowering plants, may be sparsely planted upon the mound. They will injure the tree far less than the closely matted roots of different grasses. If the grass has a weak, unhealthy appearance, give a top-dressing of bone sawings, guano, or a sprinkling of liquid manure.

Oranges, Lemons, Oleanders, and Myrtles—Plant

out in the open borders, *f*, *m*, or place out in their tubs.

Potted Plants will need frequent waterings, unless turned out into the border. Shield from high winds.

Roses, as remarked above, are the pride of the garden in June. Prolong the flowering period by cutting back strong shoots as soon as the first bloom is over. Even June roses will frequently flower again with this treatment, while the perennials are greatly benefited by it.

Rose bugs and slugs will be troublesome unless kept in check. Dust freely with lime, or syringe with whale-oil soap. Repeat the application until all are destroyed.

Transplanting many of the early sown flowers is now in order. Select a cloudy day before a rain, if possible, and take up plenty of earth carefully with the roots, using the trowel, and the plant will receive very little check. If done in dry weather, water freely. The best plan is, to make a hole, and pour in a large amount of water. Set the plant into the water, and as it settles away, fill in earth. Let the last half inch be dry soil, which will prevent baking.

Verbenas and Petunias now make a fine show if a good collection was put out last month. They may still be planted, *f*. By pegging down the verbenas, a large mass or mat can be formed from a single plant.

Water trees and flowers recently transplanted, if the month prove dry. Nature's own showers are best, however, and a good stirring of the soil to help draw moisture from below, and retain that which falls upon the surface, will usually answer all purposes, except for transplanted shrubs, trees, and flowers, or for newly turfed edgings.

Green and Hot-Houses.

The principal occupants of these houses now grace the flower plots and borders, leaving very little to be attended to in-doors. Propagators still retain some of the tropical plants, and others which they are multiplying as fast as possible. Cuttings strike more readily inside, where moisture and shade are regulated at will. The remaining plants require an abundance of air, and should be watered frequently. It is now time to make provision for a stock of Winter blooming plants. Unless cuttings are put in soon, the plants will not have sufficient age and vigor to flower freely. A good supply of materials for potting soil should also be collected. Such compost or mixture is better after laying several months.

Camellias do quite as well in the open border, to which they may be carried, *f*. If retained on the shelves in the house, water and syringe often. Watch for and check the approach of insects. Cut back to a bushy well formed head.

Cuttings of Chrysanthemums, Myrtles, Hydrangeas, Fuschias, Geraniums, etc., intended for blooming next season, may be made and potted, *f*, *m*.

Geraniums are in full flower, and should be watered freely. Insert cuttings and make layers to increase the stock of desirable kinds.

Grapes—The early houses will now be ripening their fruit, and the syringing overhead must be omitted. Some of the later crops need a further thinning, while others, with little forcing, are just setting fruit. Pinch back bearing shoots to three leaves, at most, beyond the bunches, and rub off superfluous shoots. Air freely; water as required.

Layer and Inarch woody and other plants which do not root readily from cuttings.

Potting—Many of the rapidly growing plants will now require more room, and should be transferred to pots of a larger size. Have a good supply of properly prepared potting soil at all times in readiness. Two parts leaf mold or well decomposed muck, one part garden loam, one part fine sand, and one part finely pulverized and well rotted manure, make a good soil for potted plants.

Seedlings of sufficient size should be transplanted either to small pots or set in the open borders.

Verbenas and Petunias—Make early preparation to increase the supply of young plants by layering and putting in cuttings for in-door blooming next Winter.

Water—Give as may be wanted. A little may be necessary night and morning upon plants in small pots in a dry atmosphere. Examine after rains to see if drainage is perfect.

Apiary in June.

BY M. QUINBY.

Bees increase rapidly in this month; any stocks failing to do so, should at once be examined. If the cause be diseased brood, drive them out into an empty hive, to commence anew. If from want of a queen—unless the colony remains pretty strong, which is hardly likely—it is best to drive out the bees, and unite them with some other stock. Save the hive and contents for a new swarm. Fumigate the combs, to destroy the worms that will be at work now. It will have no bad effect on the bees. I have used a hive for a new swarm within twenty-four hours after smoking it, with good results. If a queenless stock has bees enough to defend it from the moth worm, till you get a small swarm—second or third—containing a queen, the latter may be introduced with the bees already there; sprinkling the whole with sweetened water, or introducing a little tobacco smoke, to prevent quarreling. They usually unite peaceably, but not always.

Bees will swarm more, proportionally, in small apiaries, than in large ones. It is quite common to average two or three from a stock. If the increase of stocks is a greater object than surplus honey, small swarms may be kept separate. When surplus honey is the leading object, the after swarms should be united, until powerful colonies are obtained. The season must be extraordinary, when stocks can be greatly multiplied, with a great yield of surplus at the same time. The system of no colonies except strong ones, is much the safest, as in seasons of even less yield than usual, such provide sufficient winter stores, and often surplus. On the other hand, small colonies, without a good yield of honey, seldom get winter stores. In the swarming season it is impossible to tell what the last of the season will be, and it is bad economy to keep a great number of small swarms, without being prepared to feed them up to the proper condition, or to sacrifice them. The inexperienced would do better to take the safest path.

The first issue from a hive is usually large enough for a good colony; the second half as large, the third a quarter; consequently two of the second, and four of the third will be needed together, to make a swarm equal to the first. The time of issuing, whether the first or last of the month, should have some influence in governing the size of the swarm; as a second swarm the first of the month, would be about equal in value at the end of the season, with a first swarm issuing a month later. Third swarms should not be hived alone—unless in some rare cases—but should be either joined with some other, or returned to the parent stock. Swarms that issue on one day, may be united with little risk of quarreling. One day intervening will increase the liability, and two still more, and three or four days apart is as long a time as it would be likely to answer for most bee keepers to undertake uniting them. When they do not agree, a good sprinkling with sugar water will have a pacifying effect; tobacco smoke blown among them, will answer in most cases.

To return a swarm to the old stock, and have but little trouble with it afterward, it is best to hive it first, and carry near the old stand, and let it remain till the next morning, when all the queens but one will usually be destroyed, as well as the supernumeraries in the parent hive. Shake out the swarm, and look out and secure the queen, then put a few bees at the entrance, with something on which the rest may creep there, and they will all readily enter.

Two first swarms, when hived together, are in value about two-thirds of what they would be if

each were separate. Together, they may store a little more surplus honey, but one of the colonies is lost, as such stock next Spring is of no more value than a single swarm. When two or more swarms issue at one time in the same yard, they may join. If one has clustered, the next, when flying near, will often settle with it. If a swarm is being hived, another seeing it, is almost certain to go in also. These things can often be prevented. When one swarm has commenced flying, and there are indications that another will start before the first is hived, sprinkle the last thoroughly with cold water, before any leave, to keep them back. If the first has clustered, or is in process of being hived, cover with a sheet to keep out of sight. If two large swarms do actually cluster together, divide as nearly equal as possible, in hiving, and set the hives 20 feet apart as soon as the bees are in. If each has a queen, they will remain quiet, if not, they will gather into one hive, a few going at a time, when the operation of dividing must be repeated. Should it be decided to leave them together, it is not desirable to get a larger hive in consequence, but give additional room by putting on the surplus boxes immediately, and if still more room is needed to accommodate the bees, an empty hive, inverted under the first, will be sufficient for a few days, until they get established. This last must not remain until the combs are extended down into it. Very large swarms have no more bees at the end of a few months, than colonies of the proper size.

Remove all swarms to the stand as soon as the bees are in, and shade for a few days, raising one side of the hive half an inch.... Boxes may be put on all very large swarms immediately on being hived. On others it is unnecessary until the hive is nearly full. Do not let any time be wasted by the bees remaining idle outside, for want of room to store honey in a season of plenty. The surplus honey is the leading object in bee-keeping; by neglecting this for a few days in the proper time, all the profits of the season may be lost. The loss is not only what would be collected during the time of the neglect, but what they might subsequently store, if they only had a beginning. The bees of old stocks will rapidly enter the boxes, as soon as they are crowded in the hive. The first swarm is not delayed by additional room, as long as they are crowded.

After-swarms are not affected at all by adding any amount of room. After-swarms usually issue from the 8th to the 13th day after the first. They need not be looked for later than the 18th.... It is said that the swarming season is the best in which to introduce the Italian queen to the native bees—that less trouble and risk will be incurred than at any other time. Remove the queen that issues with the swarm, which should be the first from the stock. She may sometimes be returned to the old hive with advantage. Confine the swarm a few hours, until they fully realize their loss, when the Italian substitute may be introduced. I have introduced only one in this way, but succeeded without difficulty. Bees confined in hot weather, should be secured with a thin cloth, and kept in a cool place.... Put up a box near the hive for the wren to nest in; he will destroy a multitude of the moth worms.

Massachusetts Agr. Reports.—The Annual Report for 1860, of the Mass. Board of Agriculture, prepared by their accomplished and indefatigable Secretary, Chas. L. Flint, was placed upon our table, May 1st, and 6000 copies were distributed through the members of the Legislature to their constituents, a month earlier. This is the first State Annual Agr. Report for 1860, which has yet appeared, and the promptness is worthy of imitation elsewhere. It is a carefully prepared work of 564 pages, and contains much information of practical utility. The 86 pages devoted to the "Cattle disease" will be matter of very general interest, as it gives the whole history of the disease, its treatment, etc. Lengthy and valuable reports on Sheep, and Horses, are given. Shorter Reports on Mules, on Fowling of Lands, complete the first half of the volume. The second half is devoted to reports from the several County and Town Societies of the State statistics, etc. The whole work is a valuable contribution to our Agricultural Literature.



Into which are thrown various useful or interesting Items, Replies to Questions, Extracts from Letters, Gleanings from other Journals, etc.

Read First the article on page 167, then look through the Calendar, and see if there is not something more you plant or sow at once.

The Special Premiums offered by the Publisher, on pages 192, close this month. Look at them again. Note also the special Seed premiums on page 188, and the business items on page 189. The Standing premiums are yet continued, for which see page 186.

Mr. Bishop's Premium House Plan.—To several inquirers. This premium offered in our Dec. No., was awarded by the committee to Albert C. Nash, Milwaukee, Wis. We expect to publish the plan, but have preferred to wait until the structure is so far completed, that any modifications or improvements introduced during the erection, may be shown with the engraving.

Letters for "John Smith."—A correspondent writes: "We had a good laugh at two of your subscribers last week. They had complained because their seeds were not forthcoming, as they sent the seed envelopes all right, they said, some two months ago; but last week they were returned, and it came out that they had been sent to 'John Smith, Albia, Monroe Co., Iowa'!!! the address being copied from your sample seed envelope. Strange to say, John refused to send the seeds. Please notify him that his chance in these parts at next election will be slim, in consequence of his rash act."—A careful reading of the printed directions for sending for seeds, would have saved several subscribers some trouble. The sample seed envelope was intended only to show parties where to write their own name and address, on the envelopes sent for seed. We are under obligations to the Postmaster at Albia, Iowa, for having kindly forwarded a number of such misdirected letters.

The N. Y. State Fair for 1861 is to be held at Watertown, Jefferson Co., Sept. 17th to 20th, inclusive. Premium lists can be obtained of the Secretary, B. P. Johnson, Albany, N. Y.

Cotton in Utah Territory.—Thomas Bullock, of Great Salt Lake City, sends a good sample of cotton, and writes: "Last Spring I received through the 'Agriculturist Seed Distribution,' a parcel containing 34 seeds of Sea Island Cotton, and 33 of the Petty Gulf variety. They were placed in charge of Hon. Wm. Crosby, at Santa Clara, in the south part of the Territory. The Sea Island did not succeed, but the Petty Gulf produced exceedingly well, and proves to be far superior to any other variety raised in the country. From these 33 seeds, about 8 lbs. of seed were produced, or enough to plant an acre, and worth at least \$35 here, this year. Mr. Crosby raised cotton for 35 years in Mississippi, and he pronounces the result with this seed very satisfactory. He feels confident that there is good cotton land enough in that single county to raise a supply for the whole Territory. The cotton region is limited to narrow strips of land that can be irrigated, along the Rio Virgin and Santa Clara rivers; the general features of the country are barren deserts and mountains, unfitted for any kind of cultivation. About 50,000 lbs of cotton were raised in Utah Territory last season, but lack of sufficient machinery as yet prevents the manufacture of all that can be grown in the Territory."

Oats on a Wheat Head.—Francis Schreiner, Moss Grove, Pa., sends us a slip from the June (1854) Penn. Farm Journal, (which was merged into the *American Agriculturist* in 1857,) in which he gave an account of a head of Spring wheat, upon which were four large plump oat grains, growing among the wheat kernels. The head was kept in a bottle for a number of years, and was examined by many persons, so that there could be no mistake about the facts. The only way we can account for the circumstance, is, that as the wheat grew on the side, or in contact with the oats, parts of the wheat may have grown together, after the manner of inarching, or grafting by approach, just as we sometimes see two different trees in a forest partly united. Mr. S. does not, however, advocate the idea that wheat will turn into either oats or chess. His motto is: "put clean seed on a clean soil, and a clean crop may be looked for." We see also by the printed document before us, that Mr. S. is ahead of us; for so long ago as 1854 he offered his farm to a transmutationist neighbor, if he would change a patch of wheat into chess.

For Corn Pulling Birds.—Kernels of corn strung on horse hair six or eight inches long, are very

annoying to crows and blackbirds, and they generally quit the premises, after devouring one or two kernels thus prepared. White strings or cotton twine, stretched around the field on stakes, are suggestive of traps and snares, and are among the cheapest and most effective scare-crows. Smearing corn with tar, and rolling it in lime, not only renders it unpalatable to birds, but promotes its growth, and is at least a partial preventive against smut. A little corn, soaked in a solution of strychnine and water, and scattered around the field, is generally fatal to birds, ground squirrels, gophers, and vermin. As much strychnine, as will lie on a dime, is enough for a quart of water, which will soak two quarts of corn, or more. Great care should be used in handling strychnine, as it is a powerful poison. Common arsenic will answer, though it is much less effective than strychnine.

Young Corn Stalks for Milk Cows.—Geo. S. J. Oliver, Hamilton Co., writes that a neighbor who fed green corn stalks abundantly last season, found that the cows decreased in milk. This is the only instance of the kind we remember to have heard. It is not improbable, however, that when corn is sown thickly broadcast, the stalks may be too small and watery for substantial milk-producing food. We believe it is preferable to plant the corn in drills, and let the stalks get well grown before feeding. Planted this month, (June,) the stalks would acquire considerable size and consistence by the last of August, when most needed for feeding.

Cheap Corn Planter.—C. B. Osborn, Fountain Co., Ind., uses a corn planter made as follows: A light frame, similar to the beam and handle of a plow, are mortised together, with the upright piece extending only to the beam. The beam extends about four inches back of the upright, and a large hoe is attached to it. It is drawn by a horse, the hoe being lifted at each hill to cover the corn. It can not well be used on stony ground.

Selecting Seed Corn.—Our practice is, to select only from stalks having two or more ears, and to reject in planting the small, imperfect kernels at the butt and top end. The stalks from the small kernels will not be as large and vigorous, as those from the large, perfect kernels. If this selection adds only two bushels to the yield per acre, it pays well for the trouble.

Chinese Sugar Cane.—This may be forwarded in the Spring, by draining or subsoiling the land, by plowing concentrated manure in the hill with the seed, and by having well ripened seed. The season may be lengthened at least two weeks by these precautions. It is important that the crop should have good, rich land, so that it may not be stinted for want of nourishment. Frequent stirring of the soil with the cultivator or hoe will also aid.

Grass for Prairies.—Kentucky blue grass does well upon the prairies, and so does herds-grass, which for large yield and good quality, stands among the first of our cultivated grasses. Deeper plowing will remedy the drying up, of which our correspondent complains.

Red Top makes only a second rate hay. It is very much better to sow Timothy, or herds-grass, wherever it will grow. This is of the first quality, and is highly relished, both as grass and hay.

When to Cut Grass.—Ferd. Diekmann, Saginaw Co., Mich. Grass yields the most nutritious hay, when cut just as it passes out of flowering, and the seed is commencing to form. It will need more care in curing than if left to ripen the seed, as it contains more moisture. The molding you complain of probably resulted from storing it before fully cured.

Coal Ashes—Borers—Cranberries, etc.—Jas. Slaven, Morgan Co., Mo. Notes on all these subjects, containing the information asked for, have been given in the former numbers of the present year; and we can not so soon repeat them.

Cider Pomace for Manure.—"D." Watertown, Conn., writes that cider pomace, used as manure on an adjoining farm, was injurious to growing crops for three years, or more. It was spread and plowed in on a field devoted to corn, which proved almost an entire failure. Those places were poorest, where the pomace had lain in heaps before spreading. The remaining acid of the apple probably caused the injury; this might be neutralized with ashes or lime. "D." thinks the best use for pomace is to spread it in pasture ground, to be eaten by cattle. Milch cows should have it only in limited quantities at first.

Gas Liquor.—Charlotte Co., Va. The water used for purifying the gas manufactured in cities and large villages, contains considerable quantities of ammonia, and when it can be conveniently applied, would probably be worth securing; but we have no data to judge whether the percentage of ammonia is large enough, generally, to

make it worth while to transport the liquid far for a fertilizing material.

Amount of Plaster per Acre.—Wm. D. Belden, Jackson Co., Mich., writes that in that vicinity only 40 to 50 pounds per acre is sown, that amount being considered as beneficial in its results, as more. They procure it from Portage, O., and Grand Rapids, Mich., the latter being rather most highly esteemed. This amount of the best plaster may do much good, but we should not stop short of at least 100 lbs. per acre, and we have known 500 lbs. applied with decided advantage; it was perhaps a poorer article.

Spent Tan Bark as a Manure.—Joseph F. Brown, Providence Co., R. I., and others. Simply as a manure by itself, we should attach little value to spent tan bark, though if composted with lime until rotten, it would doubtless be as good as cheap manure, or leaf mold. But tan bark is excellent as a mulch on the soil around trees, strawberry plants, etc. It is also good as an absorbent to compost with yard manure. When thus applied to the soil, it aids in keeping it light, and in its ultimate decay acts partially as an organic manure.

Onion Maggot—Preventive.—W. E. Newton, Hillsboro Co., N. H. We have no faith in secret remedies, for which a large bonus is asked. A correspondent of the N. E. Farmer saved most of his onions by mixing $\frac{1}{2}$ lb. powdered sulphur with one pound seed, and sowing it together in a drill. The onions not so treated, were badly injured. Try the experiment by sowing a little along the row while they are quite small.

Whale Oil Soap.—The Gardener's Monthly gives the following directions for making this efficient compound for the destruction of insects: Render common lye caustic, by boiling it at full strength on quick lime; then take the lye and boil it with as much whale oil foot as it will saponify (change to soap), pour off into moulds, and when cold, it is tolerably hard. Whale oil foot is the sediment produced in refining whale oil, and is worth \$2 per barrel.

Apples for Minnesota.—Henry A. Monser, Minnesota, inquires for a list of apples which will bear well in that State. He writes that there has been very poor success with this fruit, some having had trees planted 14 years without any return worth mentioning. Will some reader in that section, who has done better, please give the desired information. No reports were received from Minnesota for the list published in the *Agriculturist*. The lists from Wisconsin will be the nearest to your wants.

Hardiness of Grapes.—Hiram Sibley Esq., of Rochester, N. Y. (lat. 43°), has 6 varieties of grapes, 3 years planted, in a well prepared border, on ground sloping a little to the north, the vines in a row 4 to 6 feet high, supported by a trellis running north and south. The ends of the lateral branches were cut off in Autumn, but the vines left fastened to the trellis unprotected during Winter. The editor of the Rural New-Yorker examined them the middle of May and reports thus: *Hartford Prolific*, entirely killed to within six inches of ground—the *Rebecca* killed to within one foot of the ground; below this buds starting—*Isabella*, *Catawba* and *Diana*, killed to within 3 feet of ground, and all side shoots killed to one bud at base.—*Delaware*, *Northern Muscadine*, and *To Kalon*, wood all sound and buds breaking.....Seven other varieties, two years planted, two to three feet high, stood as follows: *Garigue*, killed nearly to ground—*Clara*, and *Raabe*, ends of lateral shoots injured, but two or three buds nearest base breaking finely.—*Concord*, *King*, *Logan*, and *Northern Muscadine*, all uninjured.

The Delaware Grape Productive.—Mr. Charles Downing, of Newburg, writes that he planted, five years ago, one each of the *Rebecca*, *Raabe*, *Delaware*, *Hartford Prolific*, *Concord*, and *Elsingburgh* grape, in a continuous row, the cultivation, etc., being the same; and, so far, the Delaware has yielded more fruit than any one of the others. Mr. D. also places the Delaware at the head of the list in flavor.

Grape Stakes.—The Farmer and Gardener says, small cedar trees of symmetrical form, make excellent stakes or trellises for grape vines. Cut them down, thin out the smaller branches, but carefully preserve the main ones, cutting them to a pyramidal shape. When covered with vines they are quite ornamental.

Cherry Currant is probably a seedling. It has been in cultivation in this country for a dozen years, or more. It is considered by our best pomologists as too sour for the table.

Strawberries in Hills.—Samuel Rolfe, Cumberland Co., Me., writes that from a bed of strawberries,

(Hovey's Seedling and Boston Pine,) 11 by 14 feet in extent, he gathered 42 quarts in a single season. A dense fog, which set in about the time they were fully ripe, prevented picking enough more to make the amount at least 50 quarts. 342 ripe berries were taken from one hill. The bed was set out in the Fall two years previous; the plants put in hills 18 inches apart, and the runners kept constantly clipped. He favors this method of cultivating strawberries.

Quinces in March.—M. St. John, Medina Co., O., states that he has a variety of quinces, which keep until March. This is unusual. No mention is made of the quality or other characteristics of the fruit.

The Green Rose, noticed in the *Agriculturist*, Vol. XIX., page 366, Dec. No., is claimed by a writer in the *Gardener's Monthly*, to have been first introduced to the world by a Baltimore florist, about seventeen years ago. The plants were then sold at \$2.50 each. He also states that a Philadelphia florist sent it to England and France in 1832. It did not prove popular here, its novelty being about its only recommendation.

Nursery Catalogues.—The farmer's or gardener's library is incomplete without a good collection of Nursery and Floral Catalogues. These publications, of late years, are something more than mere price lists; they often contain condensed botanical, and practical information, which could be obtained only by consulting and comparing numerous authorities inaccessible to the general reader. One of the most complete we have met with has just been issued by the Bridgemen of this City. It comprises eight distinct lists of flower, vegetables, fruit and ornamental plants, neatly bound together, and is valuable merely as a work of reference. We have frequent occasion to consult its pages.

Books for Farmers.—Thomas H. Williams, Co., Minn. In our advertising columns, page 191, is a list of good works on most branches of husbandry.

Composition for Roofs—Roman Cement.—Thomas Stokes, White Co., Ill., writes that he has a recipe for a roof covering, consisting of 8 gallons tar, 5 lbs. rosin, 3 lbs. tallow, and 2 gallons of "Roman Cement;" he inquires where the last named article can be obtained. Roman cement is simply a good quality of hydraulic cement, (often called water-lime), brought from England. It is sold by importers in this city at about \$5 per barrel. For most purposes, we doubt whether it is superior to the best Rosendale cement, which can be obtained here for about \$2 per barrel, or less if in quantity.

Leaky Roofs.—Mrs. L. A., Chester Co., Pa., inquires for something that will not peel off, to apply to a rusting iron roof, beginning to leak. Good paint will not peel, if its "life" is not killed by too much "patent dryer," or other material. A slow drying oil paint is most durable. We like and use Ellery's India Rubber paint, which is similar to any common paint, with the addition of a mixture of India rubber and gutta percha worked in. An out-building, covered with shingles, which leaked badly one year ago, we covered with cheap cotton, and applied two coats of Ellery's paint. It stands well, and sheds water perfectly.

Novel Mode of Churning.—A newspaper item, (which is of course true!) says that in Chili churning is done thus: The cream is put in bladders, and these are tied together and swung over the back of a mule. The animal is then kept trotting around the yard until the butter "comes." Whether it would be easier to keep a mule "trotting" than to work a churn dash we are not able to decide. What say the air-compressed-double-action-force-pump-churn men to this plan of churning in air-tight bladders?

Milking Machines.—C. Mifflord, Addison Co., Vt. We know of no apparatus for milking superior to an old fashioned one, used on the homestead farm in our younger days. It was a most ingenious contrivance, having pads and levers opening and closing alternately, so that the milk was drawn rapidly and perfectly. It would take too much space to describe it accurately—it was called the *hand*.

Canada Thistles.—James R. Clark, of Waverley, gives the following method to eradicate them. Cut them close to the ground, pour brine on the stubble, and turn in cattle or sheep. The animals attracted by the salt, will perform a second grubbing, and make thorough work with them.

Warts on Horses and Cattle.—According to Dadd, these are best cured by tying a stout thread around them. He gives directions as follows: "Take a common suture needle, and arm it with a double ligature; each ligature to be made of three threads of saddler's twine, well waxed; pass the needle right through the center of

the wart, close down to the skin; tie each half separately with a surgeon's knot, as tight as possible; cut the ends pretty close to the knot, and in the course of a short time, the whole will drop off. A single ligature will do for warts with a small base." Tincture of aloes and myrrh will remedy bleeding, and powdered charcoal and blood root, in equal parts, are good for ulcerations.

Administering Medicine to Horses.—J. G. O. writes that on one occasion he had a sick horse, to which a New-York carman administered medicine from a bottle by elevating the animal's head, and pouring the dose down his nostril. There is a passage down the throat by way of the nose, but it was not intended for any such use, otherwise the horse would naturally drink through his nose. In cases of lock-jaw, liquids are sometimes given in this way by veterinary surgeons, but except in such cases of necessity, always use the natural road to the throat, through the mouth.

A Large Horse.—Chas. L. Hilbourn, former editor of the *Morgan County Clarion* (Ind.), referring to a late item in the *Agriculturist* about the largest horse in the world, sends us a slip from his paper describing a horse exhibited at the Ohio State Fair, in Sept. 1855, called "Rocky Mountain Chief," which at 4 years old weighed 2,500 lbs., measured 11 feet from head to tail, and stood 21 hands high. Can any one tell where he is, and how large he is now—if alive?

Chester County Hogs.—C. J. Warren, Rockingham Co., N. H. This breed of swine is as distinct as the Suffolks, Berkshires, or other varieties. The marked points are, white hair, thin skin, length and depth of carcass, small offal, and ease of fattening. These characteristics have become confirmed in this race by great care in breeding for more than 20 years past. They originated in a pair of Bedfordshire hogs, which were crossed upon the best of native stock obtainable by their owner, Paschal Morris. Their reputation is now fully established.

Ring Bone.—James J. White. This disease is of the same nature as spavin, only situated in a different part of the horse's leg, and may be treated as recommended on page 72 (March No.)

Feeding Sheep in Winter.—A subscriber in Wisconsin gives as his list of fodder and condiments, "corn, oats, wheat bran, lime, ashes, tar, salt, barley, rosin, and sulphur." He complains that 7 out of a flock of 192 died, eating heartily to the last. There are many causes of disease among sheep besides an improper diet. Sometimes they are kept in too close quarters, and die from want of cleanliness and ventilation. Sometimes the soil is too wet. Sometimes they die from excess of fat. We should add to this bill of fare, a few roots—carrots, or turnips—fed daily. They act favorably upon the bowels, and promote the health of the flock.

Sheep and Dogs in Massachusetts.—The sheep in Massachusetts numbered 378,226 in 1840; but they decreased to only 11,311 in 1860. In 1850 they numbered 188,631, and produced \$85,000 lbs. of wool, while the manufacturers of the state consumed 22,000,000 lbs., outside of domestic or household products. The returns from the various towns, almost without exception, attribute the decrease in sheep in great part to the killing and worrying of dogs. The benefits of the stringent dog law passed two years ago, are beginning to be perceived. All dogs are taxed, and from the fund thus obtained all losses caused by dogs are paid.

Lice on Cattle.—James C. Wallace, La Salle Co., Ill., writes that lice on cattle can be destroyed by washing the infested animals with water in which unpeeled potatoes have been boiled. He says two or three applications are sufficient. It is easily tried.

Cholera in Hens.—Mrs. W. C. Vail, Jefferson Co., Ind., inquires how to treat hens affected with a disease resembling cholera. We have never seen any thing of the kind. Some of our readers may be able to advise in the matter.

Mixing of Potatoes.—J. Reeder says, in the Farmer and Gardener, that during fifteen years experimenting with potatoes, he has never known them to mix in the hill, and he pronounces it impossible.

Squashes versus Pumpkins.—The former is much the better article. The Hubbard squash is not only an excellent dish for the table, but superior fodder for cattle—though less can be grown on the same ground.

Beach or Sand Plum.—M. Brown, Dukes Co., Mass. Stocks of the above will answer for grafting the cultivated plum upon, but they must be planted in a light sandy soil. Other stocks are preferable, however, and the beach or sand plum is of little value as fruit, in comparison with finer sorts.

The War, and Farmers.

The effects of the War upon Production—The Prospective Demand—The Certain Prospect of High Prices—What should be Done at Once.

Our office windows open directly upon the City Hall Square, and its extensive barracks, where are gathered the hosts of armed soldiers that start from this point southward. Almost every day we witness the arrival and departure of one or more regiments of 800 to 1000 men each. A large number of these troops are stalwart men, who have come from the farms of New-York and New-England. In the middle States and at the West, a still larger proportion of the volunteers are tillers of the soil. It is safe to estimate that in the Northern States alone, more than 50,000 able bodied men have already been withdrawn from the labors of the farm, (to say nothing of at least four times as many more drawn from other occupations,—all of whom must be fed, by the way.)

It is below the mark to reckon the average annual result of the labor of each of those men leaving the farm, as equivalent to 1000 bushels of corn. (The aggregate result is the same, whether a man raise corn only, or say 150 bushels of wheat, 200 bushels of corn, 10 tons of hay, 100 bushels of potatoes, with small quantities of oats, barley, peas, beans, etc., for these taken together are equivalent to the 1000 bushels of corn. He would be a poor laborer indeed who could not, without aid, produce the amount here indicated.) We then have, as one result of the withdrawal of 50,000 men from agriculture, a diminution of the products of the soil equivalent to at least 50,000x1000, or *fifty million* bushels of corn! Hundreds of thousands, perhaps millions of acres in the immediate vicinity of the seat, or seats of war, will be only partially tilled the present season. These, with other disturbing causes will, at the best, tend to greatly reduce the aggregate farm productions of the present year; and the inevitable result will be an increased demand and higher prices for all that is produced from the soil.

Looking abroad, we find a large deficiency of breadstuffs still to be supplied from this country. Since the last harvest, more than thirty million dollars worth of our wheat, flour, and corn, have been exported, and this, too, while the purchasers have had their own crop remaining to draw upon. With continued peace in Europe, the demand for our breadstuffs must be large for many months to come. But there, as here, vast armies are being raised; almost all of Europe is being placed upon a war footing; and on the other side of the Atlantic, the signs of the times are portentous of a Continental war.

As we are importing comparatively little, and shall import still less for some time to come, our breadstuffs sent abroad must bring back large amounts of hard coin to be added to our present specie reserves, which are already larger than at any former period. Over fifty million dollars are now lying in the bank and Sub-Treasury vaults of this city alone. This money, which has lain partially idle, owing to the stagnation of business for some time past, is now beginning to move. Within a few months it will have been absorbed by loans to the General and State Governments, paid out in war expenses, circulated through the country, and in part returned to the bank vaults, to again go through the same round. In its course, most of this money will pass through the hands of the producers, partly for the direct purchase of army

provisions and forage, and partly for food to supply those engaged in manufacturing and furnishing implements, equipments, and other incidentals of the war. A hundred millions at least will be expended by the General Government alone, within the present year, in addition to its usual current expenses. The rapidity of circulation will, in its effects upon business, make this sum equivalent to two or three hundred millions in ordinary times. The agriculturists will reap a golden harvest from the strife and commotion of the times, and leaving out of consideration the motives of patriotism, which should incite them to do all in their power to produce unstinted supplies of bread, corn, meats, and other provisions for those who go forth to fight the battles of the country, self interest should prompt them to spare no effort, no skill, to raise the products of the soil to the highest possible limits the present season. The planting season is far spent—is just at its close—but let us see

What can still be Done to Increase the Products of the Soil this Year.

THE WHEAT AND RYE FIELDS.

These are too far advanced to do much with them now. Still, plaster, or lime, and especially guano, sown as top-dressing, will improve the growth and final yield. The re-opening of ditches, or dead furrows, to let all water off from low spots, will often do much to warm the soil and hasten the maturity of the crop, and quite possibly save it from rust and the later insects. Harvest will be a precarious time; the absence of 50,000 laborers at that time will be a serious hindrance. A reaping machine of his own, or the positive engagement of one from a neighbor, will be important for the grower of 10 acres or upwards. Any delay after the exact season for cutting, that is, just when the kernel is beginning to harden, is a loss of a dollar a day on each acre in the value of the crop, including its quality, weight, and the loss by shelling. "Hay-caps," (that is, pieces of coarse strong cotton, 1½ to 2 yards square, with loops at the corners for pinning down with pegs,) are quite as valuable for the grain harvest as for haying. Provide a lot of these early; use them over the hay cocks; and have them ready to spread over the shocks of wheat, rye, and oats. They will shed off the rain, and very likely save the grain in good order. These caps will generally pay for themselves in a single season, while they will last for years.

PLANT CORN NOW.

This should be the great business previous to the 10th of June—the earlier now the better. Replant any missing hill in fields already up. Seek out the nooks and corners, and wherever a hill can be made to grow, drop in the seed and cover it. Any spare pasture, any poor spots of meadow, may still be turned over and planted to corn. The more manure you can mingle with the soil under and around each hill the better. Look under the poultry roosts, in the corners of the barn yard, behind the horse stables, in the corner where the cows rest at night, under the privies, and wherever a shovelful of manure can be found, gather it up, and get a little into as many corn hills as possible. The work will pay. The good ears of corn next Autumn will bring the cash directly, or make pork or beef which will sell for cash. By going to bed soon after sun-light is gone, with a light supper, so as to sleep well, and then starting an

hour earlier in the morning, one may go out with a hoe in one hand, a basket or barrow of manure in the other, and a pocket full of seed corn; and during the hour thus gained, put in extra hills enough to bring two or three bushels in Autumn, worth a full dollar or more to the grower, and more than that to the country. The Improved King Philip, Rhode Island Premium, the Dutton, or other smaller quick growing varieties of corn are preferable for planting at this late season. Hoeing and cultivating the growing corn well, is important to its yielding well. Weeds and grasses abstract from the nourishment and life of the corn. Plaster, ashes, Peruvian guano, etc., in or around the hills, promote growth. Lime, or wood ashes, are excellent in the hill, on fresh sod land.

PLANT BEANS.

Beans constitute an important item in the soldiers' fare; they contain a large amount of nutriment in a small bulk. The common field, or the small white kidney bean, can now be planted with entire safety. The waste places among corn, potatoes, etc., should be sprinkled over with beans, or other quick growing crops. Beans can also be planted between the corn hills, and on land too wet to use until now. They will flourish on a poor dry soil, where few other valuable crops would eke out an existence. By all means increase the quantity of beans planted. They are good, substantial, cheap food for the home table, and will save many bushels of wheat for the market. We must, hereafter, give a chapter on the right method of cooking them to make them palatable, easily digested, and nutritious. If always thus cooked, they would be far more popular.

SOW BARLEY AND BUCKWHEAT.

Buckwheat need not be sown until July, but barley usually succeeds well when sown early in June. Besides, barley forms a pretty good substitute for wheat, in case that crop is cut off, or is in demand at extra prices. Who is not fond of a good, light, warm barley loaf—and of buckwheat cakes. How would it work to have barley, buckwheat, and garden truck enough to about support the family from six to ten months, and sell all the wheat, and corn, and most of the beans, and pay up the debts on the farm, and at the stores, this year?

TRY A SOILING CROP.

A lot of corn stalks, millet, sugar cane, or other forage, to be in part cut up green and fed to the cattle, horses, sheep, and swine, in the dry season, and in part cured like hay for winter fodder, will increase the yield of milk, and butter, and cheese to sell; will keep the animals in good heart for labor, or for increasing in weight of meat; and will save hay to exchange for cash. Plant in drills, or sow, all you can of these crops, the first, second, and third weeks in June.

DON'T FORGET THE TURNIPS.

We have not so high an opinion as some others, of the value of turnips for this country; yet they are not to be despised. They cost next to nothing, and are undoubtedly good for all kinds of animals when fed with dry forage during all the Winter and Spring. Scatter the seed on every vacant spot, alone or among other crops, wherever there is room for a root to grow and the top to spread, without interfering with something more valuable. The quick growing sorts, such as the Red Top Strap-leaf, may be sown for two months or more yet. Ruta-bagas, or Swedes, may be sown any time this month,

the earlier the better. The Long White French, Ashcroft, and others, may be sown in June or July. A little seed, a little hoeing or weeding, and a little soil, will turn out several loads of nice turnips about the time frosts come on. (If you can not get seed elsewhere, look at the Publisher's Premiums on page 188.)

AND NOW FOR THE GARDEN.

So much for the field. There is scarcely a garden vegetable that may not yet be planted or sown. Many of them do better put in now than earlier. Turnips, beets, carrots, parsneps, Lima and other beans, lettuce, spinach, sweet corn, cucumbers, squashes, cabbages, egg plants, peas, tomatoes, etc., may all be sown or set out at any time before the middle of the month, and several of them until late in July, so that not an inch of ground need be idle.

Again, much may be done by way of arranging to secure the most from a little space. Cucumbers and squashes can be put by the side of early potatoes or peas, which will be out of the way by the time the vines begin to run. Late cabbages may be set among potatoes, corn planted among early turnips, pumpkins and squashes grown in the potato patch, etc., to economize the space as much as possible. After haying, even, the sward may be turned over for a crop of turnips. In the vicinity of cities, where there is a large market for garden produce, gardeners should not be satisfied short of two crops from each plot of ground, but to do this they must manure liberally and till well.

For the American Agriculturist.

Home-made Bone Manure.

Bones make one of the best fertilizers accessible to farmers and fruit-growers. The great objection to their use is the cost of reducing them. The ground or sawed dust is expensive. The super-phosphate prepared with sulphuric acid, is still more costly. To break them up with hammers is a laborious job, and the bones are still in quite too large fragments.

A correspondent wishes to know if it will pay to carry them to his market town and have them ground in a plaster mill. That will depend somewhat upon the charge for grinding. Those in the immediate vicinity of a good bone-mill should have all the bones ground that they can command, if the toll is reasonable.

The best method for reducing bones at home, is that first introduced to the agricultural public by Prof. Pusey, of England, and since recommended by Prof. Johnson, of New-Haven. The process, in brief, is to put the bones into a pile, filling the interstices with sand, ashes, loam, muck, or any fine material, and to saturate the pile with stale urine or dung heap liquor. About one third of the weight of bones is composed of cartilage and animal matter; which heats in the heap and breaks down the whole structure of the bone, making it a fine mass. It is better that the bones should be crushed with a sledge hammer, as the finer they are made, the more completely they will be reduced by the fermenting process. In forming a heap, a layer of muck, or good loam a foot thick, should be put at the bottom. Then scatter on a layer of bones a few inches in thickness, and put on just enough of the ashes, saw-dust, or other fine matter to fill all the interstices. The object is to bring the bones as closely together as possible, and to make the pile compact. When this is done, wet the whole with urine, or barn-yard liquor, and cover a foot thick with muck or loam, to

absorb the ammonia that will escape from the fermenting mass. In warm weather the fermentation goes on rapidly, and the bones will be decomposed in from two to six weeks. Such fragments of bone upon the outside, as are not reduced by the first operation, may be put up in a second heap. The bones in the center of the heap will be most perfectly decomposed, and the larger the heap, the more complete the disintegration. The process of fermentation may be ascertained by thrusting a bar into the heap. If the ammonia escapes, which will be indicated by the smell, add more muck.

Dead Animals for Manure.

In Spring and early Summer, farmers not seldom have carcasses of dead animals to dispose of, and which are often thrown away and wasted. Rightly managed, they would make excellent manure. The expediency of the common practice of burying them in a crude state among the roots of grape-vines and other gross-feeding trees, may be questioned. Rather, let them be cut up into small pieces, then stacked in the corner of some field or back-yard, scattering on a little lime and muck, or charcoal if at hand, as the pile goes up, filling all the spaces between with some absorbent material, and covering each piece before another is thrown on. The offal will slowly decompose, and the gases, instead of passing off into the air, a nuisance to all the neighborhood, will be absorbed and saved. In the Autumn, this heap may be broken down, shoveled over and mixed; it will then be a very valuable fertilizer.

The Potato-Rot—Three Proposed "Sure Remedies."

The thousand and one "new and infallible" remedies proposed, from time to time, for the cure of this disease, have done so little to arrest it, that every one has come to feel suspicious of anything new. Among the older remedies, we know of none better than the use of ashes. A successful farmer, near the writer's residence, states that he has tried ashes for several years and with almost complete success, and he wants to speak of them to the readers of the *Am. Agriculturist*. His method is this: Shortly after the second hoeing, sow upon the vines a dressing of unleached ashes, using from two and a half to three bushels per acre. Repeat the application once in six weeks, until the crop is matured. Our friend, it would seem, considers the disease of atmospheric origin, or as caused by an insect in the leaf, and not at the root. But whatever the origin, he keeps the tubers sound by treating the leaf.

John B. Austine, residing near Warren Depot, Worcester Co., Mass., asserts that he has a positive remedy for the potato rot, and claims a right of discovery. He sent a box of seedlings, in good order, to the office of the *American Agriculturist*, on the 18th of April, and wrote: "They were planted the first week in May last year. Aug. 18, I put my feet on each side of the hill, and pulled the tops off. Pressing the soil down, the tops were thrown upon the hills, and not a rotten one was found in the 24 bushels gathered." He thinks the disease begins on the vine, and extends down to the bulbs, and that by stripping off the tops as soon as there is the least sign of rot, or black spots, the potatoes may be left in the ground any length of time, or until convenient to dig and store for Winter, without the slightest danger of rot. Mr. Aus-

tine says he has proved the utility of his process by five years of successful experiment. But perhaps the exemption of his crop has been due to other causes. If he will further test his remedy by pulling up only alternate rows, and if he then finds the rows left undisturbed, to be affected with the rot, while those treated by his method remains sound, the result will be somewhat conclusive. There is some plausibility in it, and it may be well for others to experiment with a few hills at least. If the vines are stripped off too early, it must lessen the yield. A few hills might be pulled at successive intervals of a week, and the results noted.

We find in the English "*Mark-lane Express*," of March 10, a communication from a farmer whose theory is somewhat similar to that of Mr. Austine. The English farmer concludes from microscopic examinations, verified by experiment, that the potato disease is a sort of minute fungus deposited at first upon the leaves and haulm, (vines,) which spreads with remarkable rapidity over both tops and roots, and finally destroys them. Last season, when the haulm had reached its full growth, early in July, he bent the tops over and placed earth upon them to keep them down. This was to prevent the rain from descending the vines to the roots, carrying the fungus with it. The portion of the field so treated, although a heavy clay soil, produced a good crop of potatoes, not one in fifty rotting, while those allowed to grow in the usual upright manner were a complete failure. The same thing was confirmed by his neighbors. In one case a neighbor, having no room for some planks, threw them upon his potato patch, and found, contrary to his expectations, at digging time, that those so covered were in excellent condition, while the others were badly diseased. As in the former case, the thousands of minute fungi or parasitical plants were washed into the soil at a distance from, instead of directly among the potatoes.

A Mole-Drain Plow.

G. McWhick, Franklin Co., O., communicates to the *Agriculturist* a description of a *mole-drain plow*, constructed by one of his neighbors, as follows: A strong steel bar runs down from a plow beam, to the lower end of which is strongly welded a tapering nose-piece, followed by a succession of cast-iron balls attached to each other and to the nose-piece by links. These balls increase in size to 3 or 4 inches, and leave an opening after them of the size of the largest ball, with the soil firmly pressed. It is run 20 to 24 inches deep, and is moved about 100 rods per day, with a horse and capstan. The mole-drains run into an open ditch. On a wet bottom-land, with a black pitchy muck subsoil, this implement has produced good results. Mr. M. proposes to use a similar implement, running it every two or three rods for cross drains, previous to laying down tiles in the natural water courses, and will communicate from time to time the results. He proposes leveling and grading the surface a little, before using the mole-plow, so as to secure a uniform depth of drain. The success and permanence of these mole-drains now being used in different parts of the country, will be matters of interest. We do not see the advantage of the series of balls over a single piece of steel or iron tapering at the point and enlarged at the rear end to the required size. It would seem that a continuous piece of metal would leave a smoother opening than the disconnected balls.

Draining—Why—Where—How.

(Continued from page 137.)

HOW.

Wood Drains are frequently resorted to, and are often necessary, where neither stones nor tiles are available. In new, swampy land, we have seen quite serviceable drains made by opening a deep trench, and putting in a layer of brush or faggots. Such a drain should be eight to twelve inches, or more, wide at the bottom, and at least 2½ feet deep. The best method of



Fig. 8.

putting the brush in, is to begin at the highest end of the drain, and keep the but ends forward, letting the twigs lap back half their length upon the previous layer. In other words, lay in the brush with the but or larger ends forward, and inclined downward, as shown in Fig. 8. This leaves the surface with a continuous layer of the smallest twigs, which will better support the earth thrown upon them. The brush used for such a drain should be somewhat straight; many cross branches would leave it too open. The brush should be well packed, and the smaller limbs be pressed down smoothly on the surface, as the earth is thrown on. A layer of inverted sods, placed on the brush, is very desirable. Leaves, coarse grass, or flags, may be used to prevent the sifting in of earth among the brush. Such drains will be effective for a few years, and will doubtless pay where permanent drains can not be conveniently made.

Another kind of wood drains is made by cutting a ditch, and laying in the bottom two straight logs or poles, or split timbers, and covering them with a third one, as shown in Fig. 9. The size of the open passage will depend upon the diameter of the logs or poles, which may be from 4 to 7 or 8 inches, if conveniently obtained. Unless the timber is unusually straight, so as to form very close joints, a covering of sods or brush and leaves should be used, to prevent the

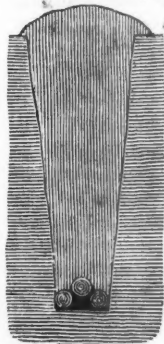


Fig. 9.

soil from running in. The permanence of such drains will, of course, depend upon the kind of wood used, and the proportion of time the drain is filled with water. A drain of this kind, made of locust timber, would last a lifetime, or longer; but this variety of wood is seldom accessible in quantity, and when obtainable, is too valuable for fence posts, to allow its use for drains. Perhaps the efforts now making to grow locust on the Western prairies, may be so successful that, after a few years, there will be enough of this timber to be used for drains, in localities too distant from clay beds to obtain tiles cheaply.

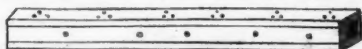


Fig. 10.

Wooden tubing is sometimes used, like that shown in Fig. 10. Bottom and cover pieces, 4 to 6 inches wide, and 1 to 1½ inches thick, are nailed upon side strips 2 to 3 inches wide, leaving a passage of 2 to 3 inches for water. The water will enter freely at the joinings of the side and top pieces, though it is better to pierce the

wood with numerous small holes. The boxes are rapidly put together. It is best to let the top and side pieces break joints in laying them down, as this secures them from being displaced. Slabs, or the imperfect bark side portions left in sawing timber, may be used, as no straight edges are required, except for the side pieces. These may be imperfect scantling. Such a drain, if made of larch or other durable timber, would last many years, and be very effective. If put in firm clay, the opening will remain long after the wood had rotted away. In these various kinds of drains, there need be no fear about the entrance of the water. Water will not remain in the surrounding soil, when there is the smallest aperture or crack, into an open drain; it would require no little care to construct a drain of any material so tight as to keep water out.

Stone Drains are as yet the most feasible, since in many places this material is still the only available one for a permanent drain; though we shall see, further on, that even where there is an abundance of stones, it is often cheaper to use tiles. Indeed, taking into account the large areas where stones are wanting, or are not abundant, tiles will soon be the principal material used for draining in our country.—A very common method, but a very bad one, adopted in laying stone drains, is that illustrated in Fig. 11, in which the drain is simply filled with small stones thrown in at random. Such drains last for a time, and at first operate well; but we doubt if one out of a hundred will be effective for a dozen or twenty years. The soil will in time clog them at some point, and a

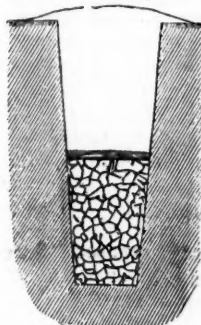


Fig. 11.

single stoppage anywhere in the drain renders it useless. They may be made somewhat permanent, in a compact soil, however, if the stones are small, and care be taken to cover them well. The best plan is to smooth off the top of the stones with pebbles or the smallest stones; then put on a layer of refuse hay or straw, evenly, but not thick, and put upon this clay, or soil that will pack well. The first layer should be tramped or beat down firmly; otherwise the first water that runs in, will open passages through, and gradually wash in large amounts of soil, leaving pitfalls above, and clogging the drain. Great care should be exercised in laying in the stones, that at no point two larger stones, lying close together, stop or nearly stop the free passage of water. The precautions above named, in reference to covering with hay or straw, and packing down the earth, etc., should be used for the protection of all kinds of stone and brush drains.

Where the stones are small, if flat stones are accessible, it is preferable by far, to get enough of these, even at considerable expense, to form an open passage under the small stones. If the

soil be firm, the form shown in fig. 12, is a very good one. Here two stones are placed leaning outwards, and coming together at the bottom; and a third stone is laid on as a cover, so as to leave the continuous passage, *a*. In such a drain the smallest flow of water will keep up a current in the narrow bottom, and clean out any soil washing in. If, as is sometimes recommended, the opening be made broad at the bottom, the stones inclining inward at the top, a small flow of water would be spread out so much over the broad base, that the current would not suffice to clear the passage of soil.

It seldom happens, however, that there are not large stones enough to build the drain in the manner shown by fig. 13; that is, with a row of stones along each side of the ditch, and a flat



Fig. 13.

one across the top, to form an arch or cover. This is the best method in all cases; yet many drains of this construction fail. Moles, rats, and mice burrow in them, and undermine the side stones; a current of water often does the same thing. Soil washes in and clogs the drain at some point where there is little current, and the whole becomes choked. The cap stone, if round, is often so turned as to nearly close the opening, and perhaps quite so, after the side stones settle. A bungling workman will, ten chances to one, leave some stone so poorly laid, that one end of it will slip down during the settling of the earth, and perhaps it will be knocked down before completion, by the stones thrown in above. All these points are to be carefully guarded against. Only yesterday we noticed the laying of a drain, 900 feet long, which was being done by contract, for 56 cents a rod. According to the contract, it was to be "10 inches in the clear;" but, owing to carelessness of the workmen, we saw places where there was not 2 inches of space left under a round stone, used as a cap; and the chances are that, when the drain settles, there will not be an inch left, if indeed the drain be not wholly closed. The fact is, no such drain should be laid by contract, and none but the most skillful, faithful workmen should ever be entrusted with laying a cobble stone drain. With flat or quarried stones there is less risk, but still a risk. An error in laying one stone may destroy the whole, and require the taking up of the entire length, to find the fault.

We have recently proposed a plan to counteract the operation of moles, the settling of the stones out of place, the washing out of earth from under the side stones, as well as from the bottom of the drain. It is simply this: When all ready to lay the stones, spread upon the bottom of the drain a thin layer of mortar, made of hydraulic cement (water-lime) and sand. Bed the side stones in this, and smooth the bottom of the drain with a board or trowel. The side stones will then be held firmly in place, and the bottom will afford a smooth passage for water, and one impervious to moles. We consider this an important improvement. A barrel of hydraulic lime (costing \$1.25 to \$2.50), and two barrels of sand, will suffice for a long stretch of drain. With this addition of a cement bed, which will not cost sixpence per rod, and with suitable care in putting on the cap stone, and a layer of small stones above, and the proper covering of refuse hay or straw, and packing earth over the latter, such a drain will not only be effective, but very lasting.

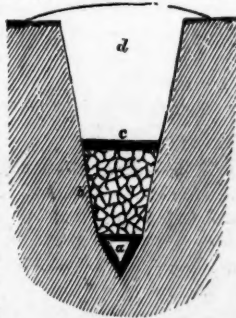


Fig. 12.

Sow Corn for Feeding.

Hardly another item of farm labor is so important as this, for June. Pastures are usually short, the last of August and September, and even in the best of grass years, the green succulent stalks of corn are a welcome addition to the feed of every grazing animal. If not absolutely needed for green fodder, then the stalks can be kept for winter use; and, if cut seasonably and properly cured, they are nearly as valuable as English hay. The ground can hardly be made to produce so much valuable fodder, at so little expense, with any other crop.

The ground should be in good heart; if not so, let it be manured with 10 to 20 cords of stable manure per acre. The corn is sometimes sown broadcast, but the crop is not as large as when sown in drills, 2½ to 3 feet apart, and cultivated 2 or 3 times, before it is too large for the operation. If foddered from the field, the cutting may commence about the time the spindle makes its appearance, and may be continued until the ears are glazed. If it is to be cured for winter use, it should be cut just as the ears are beginning to silk. If left later, the ears will not cure well. As a rule, it should not stand later than the middle of September, at which time the season is sufficiently warm to cure the stalks rapidly.

There is a choice in the varieties of corn for this purpose. The small kinds that have been cultivated mainly for the grain, for many generations, are not so good as the larger varieties. Some use the Southern corn altogether, for this purpose, and it does well. Others use sweet corn only, thinking there is more nourishment in the stalks. We have used, for several years, the Stowell's Evergreen Sweet Corn, and, on the whole, prefer it to any variety we have ever experimented with. It yields an enormous burden of fodder, and is one of the best articles for feeding swine, as well as neat cattle. Horses, also, are very fond of it, and it may economically make up half their food while it lasts. But the variety is not a very essential matter. Sow sweet corn if you have it, or can readily procure it. But, by all means, sow corn, and keep up a full flow of milk in September and October.

Millet for Fodder.

This plant has an unfortunate history in this country. Its several varieties have been seized upon by swindlers, who, by naming it Honey Blade Grass, Japanese Wheat, Egyptian Corn, etc., and publishing lying pamphlets and advertisements, have duped purchasers into paying exorbitant prices, and reaping disappointment. Nevertheless, millet has undoubtedly much value as a forage crop. Conflicting accounts are given as to its excellence for feeding. Some of the correspondents of the *Agriculturist* deem it equal, or even superior to timothy hay, if cut at the right time and properly cured; others are of opinion that it is positively injurious to stock, particularly horses. Thus, according to the *Dubuque Herald*, it was resolved by the Dubuque Farmers' Club, after a full discussion last Winter, that "the cultivation of Hungarian grass, (German millet,) is injudicious." But from the weight of testimony offered, we are of opinion, that properly cultivated and cured, it affords a cheap and safe method of adding to the winter's supply of fodder, and that it is well fitted for cutting and feeding green, to supply deficiency in pasture.

It may be sown after the season for the main

grain crops is past. The middle of June is not too late to secure a good crop in this latitude. It is more exhaustive of the soil than clover or grass, and therefore land intended for it should be liberally enriched. For a hay crop, ten qts. of seed per acre is none too much; thick seeding gives a less rank growth of stalk. It may very well occupy land this Summer, which is wanted to seed down with winter grain, or with oats next year, but where it was impracticable to plant corn. It would be greatly preferable to naked summer fallow. It might not be advisable to substitute this crop for oats, nor to disturb a good sod for its introduction; but where manure is plenty, and there is a piece of poor pasture, or other land unoccupied, try millet.

Flax Competing with Cotton.

We refer to this subject in no controversial spirit. It is, to say the least, very doubtful whether Flax will ever be able to rise to any thing like the practical importance of the great Southern staple. But the subject is now up for public consideration, and we notice it merely as one of the signs of the times.

For a year or so past, statements have appeared in the leading city journals, that a new method had been invented for preparing the crude flax, so that it could be woven in ordinary cotton mill looms, with only a slight alteration of the machinery. Until lately, we could not trace these paragraphs to any reliable authority. Not long ago we received an official report of a discussion on this subject by the Legislative Agricultural Society of Massachusetts, held at Boston. The meeting was quite large, filling to overflow the great Hall of Representatives in the State-House. This shows how deep is the public interest on the subject. We are indebted to the "New-England Farmer" for a report, which we much condense.

The discussion was opened by Mr. S. M. Allen, who, we understand, is a cotton manufacturer. He remarked that the successful growth of cotton is confined to narrow limits in the region of the tropics, while flax can be grown almost every where, from Canada to Florida. Wild Flax is indigenous to California and Oregon. It has also been raised in other countries, from the earliest authentic history, the fiber being used for clothing and the seed for oil. Egypt, Rome and Britain used it for making linen, and the American Colonists brought the custom with them to these shores. Up to about the year 1750, it was used in its simple, clear state, but after that time cotton filling was introduced, making a mixed goods, which became very popular. As improvements were made in cotton machinery, by Arkwright and others, this material came into more general use, and flax gradually lost ground. Since 1767, it has become only a secondary product in Europe and America. The principal reason of this change lay in the supposed difficulty of preparing the flax fiber for spinning. On this point we quote Mr. Allen's own words:

"The old method of working flax was in long line, using the filaments and fibers in a united thread, without reducing them down to the ultimate fibril, either in length or size; and using in their manufacture machinery peculiarly adapted for the purpose, and differing materially from that used for manufacturing either cotton or wool. The mode of preparing the fiber was also peculiar, the same being subjected while in the straw to a fermenting or rotting process, which tended to set the gluten and al-

bumen, and, when followed by boiling in alkalies, rendered the fibers harsh and brittle, and hard to spin, making the whole process of manufacturing linen more expensive than cotton or wool. . . . The process of making fibrilia, as well as cloth and yarns, from the same, is entirely different from the old methods, and a corresponding result is produced. The albumen, gluten, and other substances which pervade the filaments and fibers on the original stalk, and which cement them together, are dissolved and removed by simple solving processes, and the fibrils are separated to their original length, of from one to two inches, by a review of the solving process with a simple mechanical one, which fits the fibrils for spinning on either cotton or woolen machinery, and which makes it resemble those fibers both in color and whiteness, and in length of staple."

After this general exposition, the speaker exhibited specimens of fibrilia made from flax, looking much like cotton or wool, and which could be used with either of these fibers, or alone. It spins like cotton, and makes a stronger and better yarn and cloth. He believed flax could be raised and manufactured at the North cheaper than cotton at the South, and at a fine profit to both farmer and manufacturer. It is now grown in considerable quantities at the West, for the seed alone, the fiber being thrown away. Good land will produce two tons of straw to the acre; five bushels of seed can be got from this, worth \$1.50 a bushel, and if the straw be broken on the ground, three or four hundred pounds of fibrilia, ready for the spindle, can be obtained, leaving 2,500 pounds of stalks, which are about as good for cattle as hay. [There must be some mistake about the value of the stalks as food.—*Ed. Am. Ag.*] From a quarter of the cultivated lands of the North, flax enough could be raised to more than four times equal the cotton crop of the South."

These statements of Mr. Allen were followed by remarks and inquiries from other gentlemen. One observed that both cotton and wool had a serrated or notched edge, and would therefore hold fast when wound together, whereas flax was round, and could not be made to unite firmly. He also doubted the profitability of the crop, considering the great labor required to produce it, and the comparative cost of labor at the North. He thought, if a farmer with 50 acres of land grew five acres each year in flax, for ten years, at the end of that time he would be ruined.

Another replied that, if flax-fiber has a round edge, it becomes flat at the ends when broken by the new Randall machine, and in the solving process, and so will easily and firmly unite with either cotton or wool. He also said the original difficulty in working flax on cotton machinery lay "in its long staple, the thread being bound in the stem of the plant as a bunch of rods." But Randall's machine breaks the stem, and separates the fiber, after which it can be mixed with cotton or wool, and be spun and woven with either.

Another gentleman, from this city, remarked that cotton-flax, as exhibited at this meeting, could be produced for two-thirds the price of cotton. At the West it is harvested by mowing machines, and thus got in at a cheap rate. The old idea that flax can be grown on the same land only one crop in seven years, is now exploded; all that is wanted, is manure every other year. It is a good preparatory crop for wheat. Flax raised at the West is now delivered in Boston for four and a half cents a pound, and after

being cottonized there, is sent back where it was grown, and sold for fifteen cents a pound. . . . It costs from five to six cents a pound to raise cotton, without any profit to the planter, thus giving an advantage of one or two cents a pound to flax. Seven thousand bushels of flax-seed are annually raised in India, and more cotton than in all the United States.

We give the above facts simply as important items of intelligence. Let them pass for what they are worth. We have examined specimens of the fibrilia and calico, and other goods manufactured from it, which go far to substantiate some of the claims set forth above. A few years will determine the value of the new process, which must interest every man who cares for the prospects of American agriculture.

Weed the Wheat Fields.

If this was done last year, the labor will now be comparatively light; but if it was neglected, and foul seed was sown last Fall, the neglect must now be paid for with compound interest. If time can not be taken to go through the whole field, then mark out the best and earliest tracts, and give them especial care to procure choice, clean seed, for the next crop. Choose a time when the ground is softened by recent rain, take a garden trowel or other convenient implement for weeds not readily pulled, and root out every one that would ripen by harvest time. Thistles, cockle, dock, and many other sorts are readily discerned—deal with them thoroughly. Foreign journals complain that much of the wheat so largely exported from this country during the last year, is mixed with weed seeds, and they very properly caution cultivators against using such for seed. One sample was noticed containing large quantities of small pink bodies, about the size of wheat kernels, which proved to be bulbs of the crow garlic, (*Allium vineale*), a pestiferous weed, as all dairymen know, who have pastures infested with it. The taint imparted by it to butter is insufferable, and when, as in the above instance, the bulbs are mixed with wheat, the quality of the flour made from it is seriously impaired. See that none of this nuisance is allowed to remain in the patch of seed wheat.

Disappearance of the Wheat Midge.

Dr. Asa Fitch, N. Y. State Entomologist, in a recent article in the Country Gentleman, communicates the important and welcome information that the wheat midge has almost entirely disappeared from some sections, where, heretofore, it had seriously interfered with wheat raising. Last Summer, just before wheat harvest, the Doctor made an excursion of 50 miles in the direction of Vermont, from which the midge originally came, and was unable to find a single larva in any of the numerous wheat fields examined in Washington Co., N. Y., and Bennington and Rutland Counties, Vt.

In the central parts of New-York, and in Canada West, it is reported that no injury was received from the insect last Summer. In the latter section it was reported that a parasitic insect had subdued the midge.

In Western New-York, although the insect was as common as heretofore, it did not appear as active and injurious to wheat as formerly. This, however, is attributed to circumstances which favored a vigorous growth of grain, so that it could better withstand and recover from the attacks of the enemy.

The future history of the insect can not be

safely predicted, as circumstances favorable to it may cause it to rapidly multiply again, and in two or three years become as great a pest as heretofore. In the sections indicated, however, cultivators may sow wheat without fear of loss from this cause for at least two seasons.

Dr. F. is of opinion that the career of the insect will be analogous to that of the Hessian fly, which, on its first introduction to our shores, gradually overspread the country, everywhere devastating the wheat fields for a number of years, after which it subsided, and has seldom since attracted any particular notice.

Wheat to Chess—To the Point.

"Mayben," of Page Co., Iowa, sends definite directions for producing the transmutation of wheat into chess. His plan is easily tried, and if as successful, as he believes it will be, it will entitle him to the reward offered in the *Agriculturist*.—He says, the breaking of the tap root at a particular period of growth, will generally induce the change, and directs as follows: As soon as the wheat stems begin to joint, gently pull them until the tap-root breaks, and then tramp back the roots into the soil. Go on to a plot and treat thus several alternate sections of a foot or two square, and at harvest time you will find good wheat on the undisturbed portions, and chess on the plot where the tap-root was broken in the manner described. He thinks the running of a knife under the stems to sever the tap-root, will produce the same result, but has not yet tried this. Mr. M. also undertakes to show, how the combined effects of frost, water, etc., have broken the tap-roots, in the cases already published. We have no faith in this prescription, but give the process, that any who desire, may experiment.

TRANSPLANTING WHEAT.—A correspondent of the London Agricultural Gazette suggests that it may be found advantageous to transplant wheat in the Spring, to occupy spots which have been winter-killed. Each living plant which has tillered, would furnish from six to ten or more "sets." The experiment was tried on a model farm near Dublin a few years ago, and the crop was as good as from a field sown in the usual way. This seems like an absurd proposition in this country, where land is plenty and labor scarce, but in Great Britain, where, in some sections, women and children are glad to find employment at 8 to 12 cents a day, and land is too costly to be left idle, the plan is thought worthy of consideration.

Saving Clover Seed.

As clover forms such an important element in farm economy, both as fodder and a green manure, it is important that our cultivators should more generally raise their own seed. What need of any one paying from five to eight dollars a bushel to others, when he can raise an abundance at only a trifling outlay! A farmer might about as well buy his seed-corn, wheat, oats, etc. Our climate and soil are favorable for the growth of the seed.

All that is needed, is to lay off a certain portion of the field where the yield is clean and good; and, having cut the first crop of fodder and cured it, allow the second, which is most productive, to grow and ripen its seed. The yield will range from four to eight bushels of seed to the acre, according to the strength of the land. The first crop of fodder should be har-

vested (or it may be eaten off by sheep or cattle,) by the middle of May or the first of June, so as to give the second crop a sufficient time to mature its seed; for if not ripe before hard frosts come, it will be injured. Of course, if the land is poor, it should be well manured in the Spring or Fall previous.

Of the several machines now in use for gathering and cleaning the seed, we need not express any decided preference. Wagener's is an excellent harvester, and Crawford's is a good huller, and there may be others equally good in market. Farmers who have only a little seed to hull, can get along by using the ordinary threshing machine, modifying the running of it a little for the purpose; the work, however, has to be gone over with several times in order to get the seed perfectly clean. But if the farmer wishes only to save enough for his own use, he need not be careful to clean it nicely; it will vegetate very well if sown in the chaff. Still again, for small farmers who wish to raise a little seed, but not take the trouble to clean it, a home-made machine can be got up at little cost. A Kentucky farmer with a Yankee genius, thus describes one, in the Louisville Journal: "Make a box, say three feet wide, four feet long, and one foot deep, with the forward end left out. This should be placed on runners about nine inches wide, forming a kind of sled; teeth made of hard wood, about fifteen inches long, one inch thick, and one inch wide at the top, and half an inch wide on the under side. These should be placed about a quarter of an inch apart, forming a kind of comb by which the heads are gathered."

Curing Clover—An Old Notion.

A subscriber communicates the following extract from an agricultural almanac printed in 1809, and asks the opinion of the *Agriculturist* upon its practicability:

"To preserve Clover in its green state: take in your grass from the swath, cut it up as you would straw in a cutting machine, pack it well down in a close apartment, or in hogsheds, giving a pound of salt to every hundred weight. By preserving it thus, you will have a beautiful green hay, exceedingly fragrant and nourishing, and superior to any other fodder.

Wouldn't it be something of a job to run the clover from a ten acre field through a cutter, with the mercury at 90°? How many hogsheds would be required? The coopers' trade would flourish where this plan was practiced. One quart of salt to a hundred of hay would not prevent fermentation. To save green clover packed in a large mass, would require salt enough to pickle it,—the "fragrance" under such circumstances would be imaginary, and the "nourishment" problematical.

SOWING SOAKED SEED.—It is often advantageous to soak onion, carrot, and other small seeds, which unfits them for sowing in the seed-sowers or drills. But if the seed is mixed with slaked lime, or plaster, or coal ashes, or wood ashes, or with fine dry soil, it will soon become coated, and run readily from the drilling machine. It is useful to drill in some concentrated manure with the seed.

HOW TO TIE A BAG.—Double the string, put it around the bag, and pass the two loose ends through the loop at the other end; then draw one loose end one way and the other in the contrary direction, take one or two turns, and tie.

Manuring with the Hoe.

To the Editor of the American Agriculturist.

If cultivators have followed the advice of the *Agriculturist*, their barn-yards, stables, poultry-houses, wood-sheds, and every other spot from which manure could be gathered, are now as clean as scraping could make them, and the precious deposits have been removed to the fields, to be manufactured into corn, potatoes, and other produce. But many of us are lacking yet. In breaking up a ten-acre field for corn, for instance, one would scarcely think of leaving two acres unemployed because he had only manure enough to give a thorough dressing to eight acres; so the fertilizing material is spread thinner and there is 20 per cent less than there should be. I know the manure merchants advise to make up this want by purchasing their compounds, but I don't know that it will pay us, if it does them. Now I propose a plan which I have found to work well, which is, to manure with the hoe. Frequent stirring of the soil, by keeping the surface loose and porous, lets the air in more freely. Air contains quite an amount of carbon in the form of gas, and also a little ammonia, both of which you teach us, go to make up the substance of vegetables, and which are extracted from the soil by the roots. Then, again, if the surface is kept open, the water from below will rise to supply the place of that evaporated, and will bring with it the matters which it has dissolved, which can also be taken up by the roots. In addition to this, every weed which has been stealing nourishment from the soil, can be made to give it back with interest, by hoeing it into the earth, where it will decay and furnish plant food. So, if manure be scarce, we can partly make it up by extra cultivation. Corn in this section is usually plowed and hoed twice, or three times if the owner is not too busy; I would go through it five or even six times with a horse-hoe, or cultivator, and I believe that each time would add five bushels an acre to the yield. Of course, as the roots extend, the surface only should be stirred, so as not to injure them.

JONATHAN.

Mowers and Reapers.

Mowers and Reapers are a good deal like sewing machines. That patent is usually thought, by the owner, to be the best, which he happens to have, and knows how to work. There are several whose merits are so nearly equally balanced, that it would take a very nice judge, and a very intimate acquaintance with the working of the machines, to determine which was superior. Indeed, competent judges would be likely to come to a different conclusion. Any one of the better class of mowers is so great an improvement upon the scythe, that it will pay for itself in two seasons upon any large farm. It will mow an acre an hour, easily, and this puts the hay harvest so completely in the power of the farmer, that he can cut it just in the season when it is most valuable for fodder.

In answer to repeated inquiries, we can only say that there are several first-rate implements, between which we can hardly decide in such a way as would be best for every locality. Common sense, your own observation, and the experience of uninterested neighbors are the best sources of information. Any one of those ad-

vertised in this journal, is worth buying, we believe. They have all proved good.

HOW TO SCOUR A PLOW.—Henry M. Clark, Ozaukee Co., Wis., writes that having left his plow standing in the field all winter, of course, the cast iron parts were badly rusted. He applied a good coat of spirits turpentine, and the following week, when commencing to plow, all was scoured bright 'as a dollar' in going twenty rods. Better not to have left it out.



Rustic Summer-Houses, etc.

A great deal has been said in favor of these adornments of a country-place: we have done something in this journal towards advocating them. No one can deny that it is a pleasant sight to see ingeniously contrived arbors, trellises and seats scattered about the grounds of a rural home. But, to make them satisfactory in the highest degree, they must be made of the most durable materials. Constructed of cedar posts and branches, and of large grape-vines, they will last indefinitely; but built, as they often are, of beech and elm, and other perishable woods of the forest, they soon go to destruction.

We have lately examined several rustic houses built as follows: Four of the six sides were boarded up with bass-wood slabs; the roof was made of pine boards, and then bass-wood bark was tacked on to give it a picturesque look. The seats were of pine boards, with bass-wood bark again, and for the same purpose, probably. A table in the center was made of hemlock boards, having maple rods tacked on to cover the hemlock.

Now, this sort of work looks very well and very rustic while it is new, but the carpenter has hardly laid down his saw and hammer, before decay sets in. The rain lodges in the bass-wood bark of the roof and the sides, and they forthwith begin to rot. Then, insects of various sorts and sizes find a congenial home there, and the summer lodge which was expected to be a pleasant retreat for the ladies and children, becomes positively disagreeable. Ugh! see the ugly bugs! and the horrid worms! they exclaim, in affright, and run away to more congenial places. Now, it is poor economy to put up a building that must so soon perish; and it is waste of time to build a pleasure-house in which the dear ones can find no pleasure. A rustic house, we repeat, should be of the most durable wood, and bug-proof, or let it not be built.

We have another plan to suggest: Let a model be fixed upon, resembling ordinary rustic-work, but let it be wrought from good, well-seasoned pine. The posts may be of cedar, if convenient, but the arches, lattice-work, roof, seats, tables,

and what not, may be made of good stuff, then painted two or three coats, of a color resembling weather stained wood. The table and seats may be made movable, so as to be carried into a shed or upper loft during the Winter. They would then last for many years. By this plan we might have a rustic-looking building, without the objectionable features before mentioned, and one not costing a great sum. Another suggestion: One of the prettiest modes of embellishing a summer-house, is

to suspend rustic baskets of flowers from the roof or the brackets. These baskets may be lined with moss, and then almost any climbing plants growing in pots, may be set into the basket. The Maurandias, the English Ivy, the Moneywort, and other things, succeed admirably. They look beautiful when twining around the cords which suspend the basket, and trailing gracefully below it.

Answers to Inquiries about Illinois.

To the Editor of the American Agriculturist.

Once more through the medium of your very valuable paper, which really seems ubiquitous, I will endeavor to reply to several letters of inquiry about Illinois lands, from those who write to me, "I read your article in the *American Agriculturist*," etc., etc. This morning comes another from Virginia, and every few days they come, some with stamps enclosed, some without. But to my subject. "How is the health of your county?" To this question it is an easy matter to reply, if I merely say, as good as any in Illinois. The health of a country depends upon its situation, the water used for drinking, and the manner of living, including food, dress, and lodging.

During a residence of four years in Christian Co., Ill., in the middle of a large prairie, my family suffered from no sickness, except an epidemic dysentery in 1859, which carried off two of my children, the only ones attacked. Many of my neighbors, however, new settlers like ourselves, suffered much for the first two years residence from Intermittent Fever. I believe the unfinished condition of their dwellings, the manner of eating, living, and sleeping in the same room, the use of improper food, and of surface water to drink, with inattention to dress, were the principal causes of sickness. As these were improved upon, their sickness was less. Sickness, however, will prevail more or less in certain localities, owing to causes which are difficult to obviate at once, such as want of drainage, clearing, etc.

"How is it timbered and watered?" The larger part of Christian Co. is prairie, interspersed with belts of timber and small groves, the most of which are in the hands of settlers or speculators, and as a general thing there is more sickness there, than in the open prairie. Fire wood is easy to get near the timber, but difficult in the prairie, the settlers there mostly using coal, procured at the railroad station, Assumption, or at the mines in Shelby (adjacent) county, price 8 cents a bushel at mines, 14 cents at railroad. Timber and all kinds of lumber procured readily at railroad station, at prices varying with quality. In the timber and more hilly portion of the county, around Taylorville, county seat, and the branches of the Sangamon, there are springs. Well water is generally used, however, although cistern water is being introduced, which is certainly the best.

Good water is found at 20 feet depth in the prairies.

"What is the price of land, or how does land rent?" To this question no definite answer can be made, as it both sells and rents at very varied prices, governed by situation, improvements, and necessities of the seller or renter. I have rented my farm of 325 acres of prairie, with a good house and barn, to a tenant for one year, for one-half the wheat, 90 acres, (I finding seed, and he putting it in, and I paying one-half the machine threshing,) and one-third of corn and other crops. Money rents are from \$2 to \$3 per acre—grain rents all sorts of ways. Land sells from \$5 to \$30 an acre for raw, unimproved land, and improved lands from \$7 to \$50. *It is cheaper to buy improved lands, than to buy raw prairie at one-half the price, especially if you have no more money than necessary to purchase, build, and fence.* There are plenty of fine farms to be had, with improvements, at reasonable prices, *part cash.* To get a definite idea of the price of land, it is necessary to be "Charley on the spot," and a day or two in riding around, will give more information than a dozen letters. Do not, however, place confidence in all that is told you. Men who have places to sell or rent, usually paint matters somewhat; the truth can be had from neighbors. To those who write that they have large families and small means, I would sincerely say, consider what you do. A few acres well cultivated in Virginia or New-York, will yield you as good, or a better living, than many illy cultivated in Illinois. Do not buy or rent more than you can attend to. Crops frequently fail, prices are often very low, and unless you can get along without one or two crops, and pay for help, when required, it is a lottery to venture. Lands near railroads are to be had, improved and unimproved, at \$15 to \$30 per acre, which yield with good cultivation, 30 to 60 bushels corn, and 10 to 20 bushels of wheat; but when every one has good crops, wheat is worth but 60 to 70 cents, and corn is a drug at 12 to 20 cents. Hogs are profitable when all thing are favorable, so is stock of all kinds.

But, friends, who desire to try the rich lands of Illinois, remember that "money makes the mare go," and a little of that article is very essential for your happiness and comfort. The health and comfort of your wife and family should be paramount to all other things, and if you have not the means to build a comfortable house, and have the necessary comforts of life around you, to guard against sickness, you had better rent until you can have them. Do not go to Illinois unless you are industrious and persevering. Do not imagine, rich land will enrich you without labor; the idea is fallacious, and many have suffered from it. H. HINKLEY, M.D.

For the American Agriculturist.

Cheap Pig Feed.

In the Summer of 1858, I had two half breed Suffolk pigs. I kept them from July to October inclusive (four months), exclusively on waste cabbage leaves, with the exception of a little dish-water slop from the house. They grew very thrifty, and were nearly fat enough to kill. The leaves were fed raw, just as picked from the cabbage. I had a patch of about 1000 cabbages and the lower leaves would grow nearly twice as fast as I needed them for the pigs. The cabbage did not seem to be materially retarded in growing and heading.

In 1857, I fed an unruly cow, that I kept tied

to a stake, exclusively on the pickings of the bottom leaves of the cabbage on a patch of 600, for four months time. She got quite fat. The cabbage headed up finely with some very large heads.

L. L. FAIRCHILD.

Dodge Co., Wis.

"Horn-Ail" not a Disease.

Dr. Dadd, who is regarded as good authority upon the diseases of cattle, regards "Horn-Ail" as a symptom, rather than a disease. The common practice of boring the horn with a gimlet he ridicules as quackery. He says: "'Horn-Ail,' as it is improperly termed, may accompany common catarrh, also that of an epidemic form; the horns will feel unnatural if there be a determination of blood to the head. This might be easily equalized by stimulating the external surface and extremities, at the same time giving anti-spasmodic teas, and regulating the diet. The horns will feel cold whenever there is an unnatural distribution of the blood, and this may arise from exposure, or suffering the animal to wallow in filth. For a cure, endeavor to promote a healthy action through the whole system; to stimulate the digestive organs, to remove obstructions, both by injections, if necessary, and by the use of aperients; lastly to invite action to the extremities by stimulating liniments. Whenever these indications are fulfilled, 'horn-ail' soon disappears."

Graining Young Cattle—Root Feeding.

A subscriber, T. Boardman, Tompkins Co., N. Y., speaks of his success in giving extra feed to a pair of steers. Though the grain was chiefly fed out in small quantities, to make them gentle while they were being broken, more than any thing else, he found it a paying operation. He was astonished to see how rapidly they took on flesh when they were turned out to grass in the Spring. They grew so sleek and handsome, that they were soon in demand, and sold for fifty per cent more than any other cattle he ever disposed of, at the same age. He thinks he got at least five dollars a bushel for all the grain which he fed to them.

There is no doubt about the economy of generous treatment for young cattle, and indeed for all cattle, during the Winter. It prepares them to make the most of the grass season, when it comes. If they are lean and hollow in May, as most animals are that have been kept at the stack during Winter, it takes them full two months to recover what they have lost upon a spare diet. If in good condition when they first enter the pastures, they take on flesh rapidly, and not a day is lost. The pay for the extra feed will be returned in the extra growth if they are young cattle, and in extra milk if they are cows.

We have often had occasion to notice this in milk cows. We think they will give from 20 to 30 per cent more milk in the Summer after a diet of meal and roots, in part, in Winter. The extra feed which they require is probably supplied much more economically in the form of roots, than in grain, especially in the older States, where corn is 75 cents a bushel and upwards. Turnips, beets, mangel wurzel, and carrots can be raised from five to ten cents a bushel, and from a peck to a bushel of these roots, according to size, with plenty of hay, fed daily to an animal, will keep him in good flesh. Those who regard these roots as all water, will be surprised to see what a change they make in the looks of an animal in a very short time. In the new

States where corn is worth 30 cents a bushel and less, there is less motive for raising roots. But, during Winter, some feed beside hay is good economy everywhere. Except for turnips, it is now late to put in a root crop this season, unless in a high northern latitude, yet a fair crop of carrots or mangel wurzels may be secured even now, if sown immediately and well cultivated.

FEED FOR WEANED CALVES.—Full blooded or grade animals are often kept with the cows for six or eight months. To keep them from losing flesh, when weaned, they should have Indian meal, grain, or roots. A mixture of meal and roots is the best, if the weaning is in the Winter; if at this season, the meal is sufficient. The change of food should be made gradually, beginning with a small quantity before the calf is taken from the cow, and increasing it daily until the young animal is weaned. Otherwise serious derangement of the digestive organs would be likely to follow.

Do Moles Eat Peas?

To the Editor of the American Agriculturist:

You ask: "Do Moles eat Corn?" If they will not, there is one thing, which, from provoking experience, I know they will eat, viz: Peas. With many hopes, I planted freely last Spring, but vainly watched for the springing blade. Examination revealed the cause: I very soon came upon the "underground" track—but the peas never made their appearance. They cut my beets and potatoes very badly, and they seemed to have very nice times in the flower beds; they were not wanting even in the cellar, where I was so fortunate as to arrest a noble fellow. I shall try the corrosive sublimate with the peas, unless it injure the seeds for germinating. Death to the moles say I. "C. C."

Janesburg, N. Y., Jan. 1861.

REMARKS.—Is "C. C." sure the moles ate the peas? If he says he saw them actually eat them, or found peas in the stomach of one of them, we will believe him—otherwise we must think there was some other cause for their failure. The animals may have disturbed those growing along their tracks where they were hunting insects; but it is hardly possible that they should have gathered all the peas from the whole plot. Shut up moles in a box, as we have done; put in with them a lot of different kinds of grain, and when you find it untouched for days, you will incline to our opinion that they are insectivorous, and not granivorous animals. We do not say they will never eat any kind of seeds, when driven to it by hunger, yet there is reason for doubting this.—A little corrosive sublimate will probably not injure the germinating power of the peas, nor hurt the moles—at least not until they do eat the peas.—Ed.]

To Free Swine from Vermin.

A writer in the Southern Planter says: "If your hogs are lousy, go to their rubbing place, or what is better, take a rough twelve foot log to the feeding place, and keep it constantly smeared with tar. No spaniel ever loved water better than a lousy hog loves tar, and he applies it himself, to the most infested spots on his body, so effectually that the lice speedily disappear. I have seen 95 out of 96 hogs smear themselves with tar in less than thirty minutes after they had access to it; and not one had ever known its use before."

Pine Lumbering—A Lesson from History.

The white pine, (*Pinus strobus*), is perhaps the most valuable tree of our forests. From the first settlement of the country it has been most highly prized for lumber, and it now forms a part of almost every good dwelling in the land. The window frames and sashes, the blinds and doors are almost universally of pine. It often forms the mop-boards and shingles, the floors and parts of the frame work. This tree was widely distributed over the older States in the North, and occupied the valleys of rivers and plains, where it was most accessible to the early settlers. The pine loved smooth easily worked land, and the settler did the same. The pioneer, in making his clearing for a farm, had no thought for posterity. He wanted to plant corn and cultivate grasses, and the trees were his natural enemies. They had no value except for fuel, as they have none now, in many of the new settlements remote from navigable streams.

As the population increased, and cities began to be built, it would pay to cut and saw the pine, and send it to market. The settler wanted to realize immediately upon his purchase, and all the pine lumber was marketed that he could cut and saw. Thus all New England, except Maine, has been stripped of its pine, and even in the Pine Tree State, the pines are beginning to fail, and spruce, fir, and hemlock, are taking their place. It is said, we know not how truly, that pine from Michigan now sometimes finds a market in Maine.

It is only about eighty years since Vermont was settled, and it is not fifty years since the lumber trade was the principal business at Burlington, on Lake Champlain. The region around for twenty miles, back to the foot of the Green Mountain range, was heavily timbered with white pine. The men are now living who remember the grand slaughter upon these monarchs of the forest, and the shipping of the lumber, through the lake, and the St. Lawrence, to Europe. Trees from four to six feet in diameter, and from 140 to 180 feet in height, were not uncommon. Dr. Wheelock, of Dartmouth College, is said to have measured a tree that stood upon the college grounds, and found it 270 feet in length. But now a pine a hundred feet high is a very rare object. In a recent trip from Burlington eastward to the mountains, we did not see an acre of primitive pine forest, and but few of the second growth. Other varieties of wood are much more common than the pine. Remains of the old forests are occasionally seen, in enormous stumps not yet rotted in the ground, or in stump fences, that have stood for a generation. The export of pine lumber has long since ceased, and the region is now dependent upon Canada and the West for its supplies. Hardly an intelligent farmer can be found that does not mourn over the indiscriminate havoc of the first growth of pines. It would take at least three hundred years to restore them.

Is there not a lesson in this fact for the lumbermen of Michigan and the North-western States? They own the land, and wish to make the most of it, for themselves, and their children. The clearing up of their pine lands is likely to go forward more rapidly than in Vermont, for the tide of emigration moves stronger westward, and we have an immense population along the seaboard, that must be more and more dependent upon these new States for their pine lumber. At present they have but a small profit upon their lumber, because of its distance from market. The market is all the while com-

ing nearer to them, and, judging from the past, the cost of transportation will be diminishing. Will it not be better for their estate, a richer inheritance for their children, to leave at least half of these forests untouched by the ax? Suppose an acre of primitive pine forest now standing near the shore of Lake Champlain. With pine lumber worth from \$20 to \$30 a thousand, and a home market, every one acquainted with the business, can readily see the value of such a piece of property. Many of the trees would be worth \$100 and upwards, and an acre would purchase a respectable farm.

It is worth while for the new settlers upon these pine lands to look forward fifty years, and think of their heirs, if not of their own old age. Then an acre of cleared meadow may be worth \$50 for cultivation, and an acre of primitive pine \$1000 for lumber. Of course, the most of the forest must perish to make room for farms and the onward march of civilization. We only ask that the wants of posterity may be considered, and that the unprofitable experiment of New-England be not repeated.

Important Discovery in Sugar Making.

In the Journal d'Agriculture of Feb. 5th, the editor, M. Barral, speaks of the new process of M. Rousseau for the fabrication of sugar, as being likely to cause a revolution in this branch of industry. We are inclined to receive with distrust the glowing accounts that the French are wont to give of their great discoveries, yet we cheerfully acknowledge that some of these have proved of great advantage to agricultural science, and hope that this new process may, on further trial, be found to possess all the merit claimed for it, and that our Western farmers may be able to use it successfully in the manufacture of sugar from the sorghum. The chemical agents employed are cheap, have no injurious action on the human system, or the saccharine juices. The repeated filtrations through animal charcoal, which are now used for refining sugar, are said to be unnecessary, and the evaporation of the syrup can be effected in simple apparatus.

The juice that is extracted from the sacchariferous plant is generally colorless as long as it remains in the cells of the plant, but changes rapidly on exposure to the air, because it contains albumenoid matters, and other substances which are colored brown or black by the action of oxygen. M. Rousseau, removes the albumenoid matter by heating the saccharine juice in a boiler with three thousandths of its weight of sulphate of lime, (plaster of paris) pulverized. When the liquid reaches 212°, all the coagulable matters rise to the surface and unite in a firm head, and a perfectly clear juice remains, which may be drawn off. This juice, if left exposed to the air, will become as black as ink, but if from 6 to 8 per cent of its weight of hydrated per-oxide of iron be stirred in, it is freed, in a few seconds, from all the changeable organic matters, and continues, for an indefinite period, colorless. Nothing now remains to be done but to evaporate the water and thus obtain crystallized sugar. M. Barral remarks that he has been able to try the experiment only in the laboratory, but he has tried it enough to satisfy him that the application on a large scale will be successful. In a subsequent number of his journal he reaffirms his belief in the value of this discovery, and says that he has made excellent sugar by this process. He moreover says that in a few days an experiment will be made on a large

scale, and in September next, after the gathering of the beet crop, this process will be employed in one of the large sugar houses in France, and several farm sugar houses will be fitted up, which the farmers can visit, and ascertain for themselves all the profit that they can derive from this discovery. This process has no perceptible effect in removing the coloring matter of brown sugar, after the juice has become oxidized by exposure to the air; the repeated filtrations through animal charcoal are then necessary to refine the sugar.

We will here mention for the benefit of our Western friends the remark of an experienced sugar refiner of this city, that one reason of the failure to make sugar from the sorghum, in many cases, is that the whole stalk is ground up, top and all, whereas the top should be cut off and only the main body of the stalk ground. The top often contains an acid which hinders the sugar from crystallizing, but does not prevent the making of good syrup.

Plowing by Steam.

There is little hazard in saying that the steam plow will be in successful operation in this country within ten years from this time. The spirit of the age demands it. The painfully slow pace of the horse or ox laboriously toiling in the furrow, is all out of keeping with the times. Men who ride triumphantly over their fields with the reaper and mower, will not long be content to plod the weary rounds now required to bring their acres into cultivation. The advanced condition of agriculture demands it. Men of far-reaching intellect, capable of large plans, are now content to be farmers, but their operations must correspond to their abilities; they must be generals in the field, and engage in wholesale operations on the spreading prairies that invite to glorious though peaceful triumphs; they must number their acres by the thousand, and they will have implements commensurate with the work. Then, too, improved cultivation needs an instrument adapted to its methods. Deep tillage, and thorough comminution of the soil are recognized as essential to the best crops, and the plow as now constructed can only approximate to the required work. The great outlay of animal power needed for thorough culture, is one great obstacle to its general adoption. But in addition to the confessed need of the steam plow, we have the fact that it is actually working. Recent English journals give accounts of the successful performance of Fowler's steam cultivating apparatus—not on the exhibition grounds of an Agricultural Society merely, but in the regular work of the farm. In a single locality, within a radius of 20 miles around Overtown, there are fourteen of these machines at work, of which the owners give most encouraging statements. Mr. Stratton, well known as one of the foremost breeders of English Short-Horns, having used a 12-horse power Steam Plow, since October, 1859, says; "The machine is managed entirely by my own farm servants, and yet since we have begun to plow for wheat-seeding, 200 acres have been plowed without any breakage, or the delay of even half a day on account of either engine or tackle. . . . We go eight inches deep; and frequently at the rate of one acre per hour." Other intelligent men give testimony to the same effect. The cost of plowing an acre is stated by one owner of a machine, to be 7 shillings sterling, or about \$1.75.

Those who have compared the working

of Fowler's apparatus with steam plows already invented on this side the Atlantic, pronounce several of the latter superior; but even these have not reached the point of excellence demanded by the wants of cultivators. The field is still open for inventors, and some one will yet reap a fortune, and enrol his name with Watts, Arkwright, Fulton, and Whitney. Agricultural Societies can do much to encourage this enterprise. There has been unfortunate misunderstanding or mismanagement in the offers and awards of premiums for steam plows. Let this be guarded against.

Use the Crowbar.

A lively Yankee once begged us to advocate the crowbar. Not that he had any patent which he wanted to introduce. Any sort would do, if it were only strong enough not to bend, and light and smooth enough to handle conveniently. Then use it. The rocky hill-sides of New-England were the grand field of its display, the old, half sterile farms, which the Yankee boys were leaving for the fat prairies of the West. Stay at home, some of you, and handle the crowbar. Clear up those stony acres, and build from the proceeds imperishable fences, and then bury the plow deep in the unburdened soil. And let the manure fork finish up what the crowbar and plow have begun. What need of all the sons hurrying away from the old homestead, and going where schools and churches, and good roads and good society, and other like good things, have all got to be created. No, no: use the crowbar, and contentedly stay where you are.

About Pomological Societies.

Many things can be said for and against these associations. There is danger that some persons will endeavor to use them for selfish ends. For instance: nurserymen, or growers of any specialty of fruit, or flower, or shade-tree, or manufacturer of patent manures and the like, may take advantage of their power and influence as members of such society, to introduce their favorite articles to public notice, and to get certificates and recommendations which they do not really deserve. By personal influence, or the use of that which is said to "make the mare go," they may get opinions manufactured which will serve their purpose very well before the deluded public. Indeed, we have known interested persons to join these societies with the sole aim of pushing their own wares into market, and then to resign their membership in disgust, as soon as their selfishness was detected and exposed. We have also known persons to join these societies for the purpose of gathering all the information they could obtain from the study and experience of others, while they selfishly and meanly withheld their own from the common benefit.

The opinion is somewhat widely prevalent now, that our various pomological societies are only another name for nurserymen's clubs, got up by them, and managed and sustained for their mutual profit. Their approaching meetings, so we are told, are heralded loudly in the papers, their discussions and opinions are reported at length in numerous journals, and thus an interest is awakened in the public mind in behalf of pomology and kindred pursuits. All of this contributes largely (are you so blind as not to see it?) to the sale of the nurserymen's articles, be they good, bad or indifferent. So think the suspicious ones, and they declare their suspi-

cions, and so excite wide-spread prejudices and fears, and in this way the good cause of horticulture gets many a put-back.

It is perhaps not growing too much, to say that some persons are willing to pay the annual fee of membership, solely for the privilege of hearing themselves talk at the public meetings, and of having their names and speeches reported by the public press—a cheap way of becoming notorious, if not famous.

We are not disposed to defend the nurserymen, but there is another side to this matter. What if men are a little selfish here, and seek to promote their own welfare? Is this the only place that selfishness shows itself? May not the nurseryman look out for his own advantage, and at the same time promote the public interest? If he fail to consult the good of his patrons, it will soon be found out, and he will suffer ten-fold.

Both parties are bound together by the tie of interest. If a man endeavors to promote his own advantage by fair and honorable means, no one should complain! All business operations are conducted on this principle. Every man must take care of his own interests; and if in so doing he benefits society at large, it is all very well: it is just as it should be.

Furthermore; it is very natural and proper that nurserymen should be the leading and most numerous members of these societies. Horticulture is their business, they feel attached to it, they are generally better informed about it than other men, and they desire to increase their stores of knowledge from the experience of others. In order to adapt their stock to the wants of the market, they desire to learn the experience of horticulturists in all sections of the country. And in no way can they gather the useful information better than by attendance at the meetings of these societies.

But these associations are not composed entirely of nurserymen. Our country has now a large number of amateurs who pursue horticulture from simple love of it, who are desirous to learn all they can, and are willing to teach all they know about it. A pomological discussion by well informed men is to them a feast of fat things. A new hint about the management of fruit trees, shade trees, or flowers; information as to the merits of any new variety of tree, vine, shrub or flowering plant; in short, any new fact touching horticulture in any of its branches, is received by them with avidity and delight. Then, too, the simple fact of meeting with a large number of gentlemen engaged in kindred pursuits, feeds their zeal, and gives them new interest in their favorite employment.

And then, as all who desire can not personally attend these public meetings, the discussions are reported in our leading journals, and are eagerly read by thousands in every part of the country.

As to some of the other objections already referred to, they can be remedied or borne with. If a member becomes too loquacious, measures can be taken to excuse him from such duties. If some will allow themselves to be bribed to recommend worthless articles—why, we must work harder, and hurry in the Millennium, for that alone will put a stop to all bad things!

But again; as to these societies in their associate capacity using their power to foist poor or worthless articles upon the public, the general fact is right otherwise. Humbugs ordinarily keep at a distance from pomological associations. For, the members living in different sections of the country, come together as independent and disinterested judges. All they care to

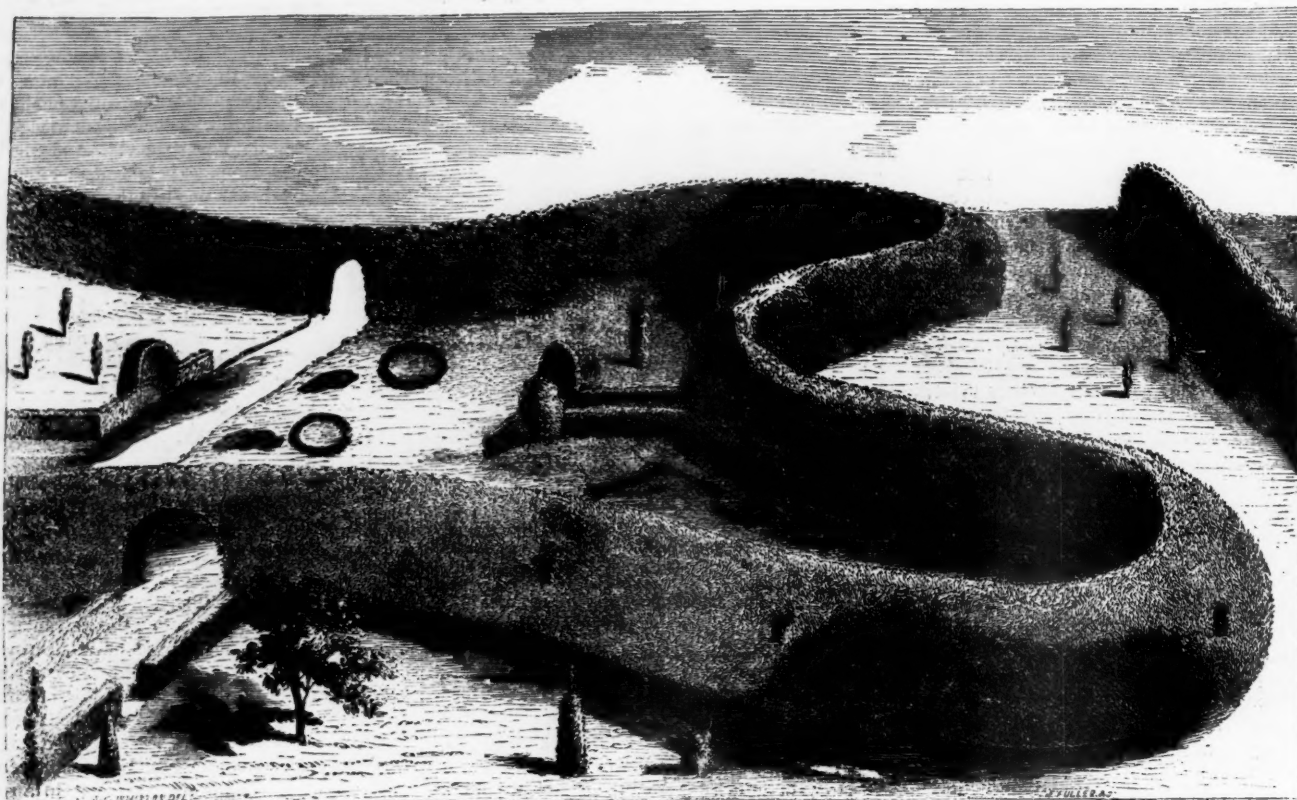
know about any article presented for their examination is, *the facts*: the name of the person introducing it, is to them, a matter of indifference. Their inquiries are, simply—"Is it meritorious? Is it worthy of recommendation to the public? How does it compare with some acknowledged standard in the same department?" And when these gentlemen pronounce judgment, they know that discerning men throughout the country will carefully scrutinize it, and will respect their opinion only as it proves to be well founded. One, or at most two instances of weak or biased judgment will destroy their reputation with the public. Hence, we say, impostors keep clear of these societies. Their wares will be weighed in honest scales, and if they prove wanting, the public will be told of it.

For these, and other reasons which need not be enumerated, we bid the pomological societies, good speed! and urge upon all fruit growers to share in the benefits of membership. To the members we say, make it your sole object to gather and to disseminate *facts*, regardless whether it affects this or that man's personal interests. Associated effort can accomplish vastly more in the way of experimenting, than individual effort can—why should we lose this advantage, because of an occasional abuse of it? Do not be too ready to suspect a brother member of sinister design, because he advocates this, or condemns that. Give him a chance to be honest. Strive to gather into your society a large number of careful observers and candid, upright men, for they are the men who give weight to a society's judgment. Let each man bring to the meetings his best information, and try to make the discussions useful and entertaining. And, as one has well said, "Let there be courtesy in debate, brevity of speech, decorum, and the careful observance of parliamentary rules; for thus only can the rights of all be secured. In the absence of these, wordy and discursive debate soon assumes the whole field, and the true object of the meeting is lost."

God Seen in the Flower.

The argument for the existence and wisdom of God, drawn from the marks of design in the works of creation, is one which can not be controverted. And it meets us at every step. In this flowering month of June, the gardener may discover so beautiful an illustration of divine wisdom, that we must call special attention to it. It is in the habits of the plant known as *Colchicum*. It blooms in October, sending up from the damp soil its flower-stems without leaves, and then disappears. Flowering thus just upon the verge of Winter, it has not time to perfect its seed and so provide for its own reproduction. But the un-matured seed lies protected in the bulb below ground through the Winter; then, in the Spring, up shoots a fruit-stalk on which the seeds mature and ripen, about the first of June. What an admirable provision! Does this happen by chance?

EVERGREEN SEEDS should be sown in a shady place, covered shallow with a mixture of sand and peat or loam. The shade of an evergreen tree is a good place to sow the seed. If exposed to the full rays of the sun, many of the young trees will die off the first season. It takes a long time to get trees large enough for a hedge, or for planting, and if time is any object with the planter, it is much cheaper to purchase trees from a well established nursery.



FRENCH AND DUTCH STYLE OF ORNAMENTAL GARDENING.

Topiary Work in Gardening.

It is interesting to note the revolutions going on in the art of gardening. Here, as in fashionable life generally, customs come and go, only to be viewed and pass away again. We find an illustration of this in the style of ornamental gardening called "topiary-work," so styled from the Latin word *topiarius*, meaning garden-painting, vegetable sculpture, etc. That is, the training and cutting of trees and shrubs in various ornamental and fanciful forms. Arbor Vitæ hedges, cut to regular form, are familiar examples.

This art has been in vogue at different times from an early period. The Romans were very fond of it. Indeed, the word *topiarius* came at length to mean, with them, a gardener, because so much time and skill were devoted to this branch of horticulture. In Girardin's historical essay on ancient gardening, we find many allusions to this taste of the polished Romans. For example, in describing a particular country seat, he says: "The terrace in front of the portico descended to the lawn covered with a species of moss, and adorned with figures of animals cut out in box-trees answering alternately to one another. This lawn was again surrounded by a walk enclosed with tonsile evergreens, sheared into a variety of forms. Beyond this was a place for exercise, of a circular form, ornamented in the middle with box-trees, sheared as before into numerous figures, together with a plantation of shrubs kept low by clipping. * * * * Here again, the internal walks were bordered with rose-trees, and were in a winding direction, which, however, terminated in a straight path, which again branched into a variety of others, separated from one another by box-hedges, and these, to the great satisfaction of the owner, were sheared into a variety of shapes and letters, some expressing the name of the master, others that of the artificer, while

small obelisks were placed here and there, intermixed with fruit trees." [See, also, Loudon's Encyclopedia of Gardening, at page 17.]

In the times of Henry the Eighth and Elizabeth, this style of gardening was all the rage. Mr. Downing says: "In these gardens, nature was tamed and subdued, or as some critics will have it, tortured into every shape which the ingenuity of the gardener could suggest; and such kinds of vegetation as bore the shears most patiently, and when carefully trimmed, assumed gradually the appearance of verdant statues,



Fig. 2.

pyramids, crowing cocks, and rampant lions, were the especial favorites of the gardeners of the old school." The garden of the Vatican at Rome has now the name of the reigning pope, the date of his election, etc., cut out in box. The Dutch and the French have for centuries shown a strong partiality for, and indulged in this formal and artificial style of gardening.

During the 17th and 18th centuries, in England this practice was carried to its height, even to absurdity. The poets and wits of the country leveled their shafts at it, and with good effect. Here is a description of a topiary garden:

"There, likewise, mote be seen on every side
The shapely box, of all its branching pride
Ungently shorn, and with preposterous skill,
To various beasts, and birds of sundry quill
Transformed, and human shapes of monstrous size.

* * * *
Also, other wonders of the sportive shears,
Fair Nature mis-adorning, there were found;
Globes, spiral columns, pyramids and piers
With spouting urns and budding statues crowned;
And horizontal dials on the ground,
In living box, by cunning artists traced,
And galleys trim, on no long voyage bound,
But by their roots there ever anchor'd fast."

The satire of Pope was especially severe, and his

assaults were followed up by those of other wits. "Adam and Eve in Yew," the "Green Dragon in Box," "Noah's Ark in Holly," and the "Old Maid of Honor in Wormwood," withered away before these scorching blasts, and the natural style, the English style, *par excellence*, became all the vogue. Terraces were leveled, strait walks were made crooked, geometrical flower beds were molded into round, oval, serpentine, and all sorts of fanciful shapes; statues and vases and nearly all artificial adornments were proscribed.

But the Dutch, with their usual pertinacity, and the French, with their fondness for art, have retained to this day, many of the features of the ancient mode. Near Paris, and in the villas of Amsterdam, one sees verdant colonnades, (see Fig. 1,) arches, walls, and pyramids in all their glory. It is plain, too, that the style is being revived in England, and in some parts of our own country. Its peculiarities are not now allowed to appear in the most conspicuous parts of one's ornamental grounds, but rather in side scenes, and as episodes and matters of curiosity.

Figures 2, 3, 4, and 5, represent topiary work in the grounds of H. Hunnewell, Esq., West Needham, Mass. Some specimens are formed from the native arbor vitæ, others from the hemlock, the



Fig. 3.

black and white spruces, and the white pine. All kinds of trees may be sheared into these fantastic shapes, but the slow growing sorts and those of dense habit yield the best results. Deciduous trees make pleasant scenes in Summer, but evergreens are on the whole preferable, being

sources of enjoyment throughout the entire year. Many persons rail at this style of gardening, because it is artificial. Artificial indeed, but is not nearly all gardening so? Away with your

grafted fruit trees, your hybridized plants and fruits, your double flowers, your smooth lawns, your vases, sun-dials, terraces, and all sorts of ornamentation. But not so; let these things remain, only use them in moderation. It is said, and with a show of probability, that the old objections to topiary work in England, arose from the exclusiveness and pride of the owners of grand estates. These aristocrats had gone to great expense in buying, or trouble in training curious specimens of this art, when lo! it was found that poor gardeners all over the kingdom, smitten with the mania, were growing equally fine specimens in their own cottage yards. This would never do. "The quality" must have something that could not be so easily appropriated by everybody. And so, for the time, it was decreed that topiary work should be tabooed: no sculptures were admitted to be genteel except marble, which were so costly that common people could not afford to possess them.—Well, however this may have been, the taste is now reviving, and rich and poor may indulge it. If we may be allowed to advise our readers in this matter, we would say briefly to our northern friends: try, among evergreens, the Hemlock, American and Siberian Arbor Vitæ, the Spruces all of them, and even the White Pine. Among deciduous plants, the Privet, Buckthorn, Hawthorn and Beech are excellent. Our southern friends may employ not only these, but the holly, box, yew, and Osage Orange. Whatever trees are used, let them stand one year after planting, to get well established: then cut them into the desired shape. For a few years, the principal shearing should be done in the Spring; but after they have reached the intended form, they should be pruned chiefly in the Summer, and let this be done several times in the season.



Fig. 5. Among deciduous plants, the Privet, Buckthorn, Hawthorn and Beech are excellent. Our southern friends may employ not only these, but the holly, box, yew, and Osage Orange. Whatever trees are used, let them stand one year after planting, to get well established: then cut them into the desired shape. For a few years, the principal shearing should be done in the Spring; but after they have reached the intended form, they should be pruned chiefly in the Summer, and let this be done several times in the season.

Important Reports on Apples—Valuable Summary.

(Concluded from pages 110 and 143.)

The following reports (69 to 77) comprise the balance of those received to May 10th. This entire list is doubtless the most valuable thing of the kind yet published. The reader will see how great is the range of varieties preferred in the different sections of the country; those residing near each other agree somewhat closely. It adds to the value of these reports, that each one of the whole seventy seven has been prepared independently. A nurseryman stated to us that this table was worth fifty dollars to him alone, and he would willingly have paid that sum to learn the individual opinions of the societies and persons of good authority who have kindly furnished their lists. These opinions will be proportionally useful to private individuals.

69. Cheshire Co., N. H.—Report from Lewis Taylor.

Summer.	Autumn.	Winter.
Early Harvest. William's Favorite. Yellow Bough.	Pear Apple. Fall Pippin. Porter. Gravenstein.	Northern Spy. Peck's Pleasant. Mother. R. I. Greening. Baldwin. Ladies' Sweeting.

70. Fairfield Co., Conn.—Report from R. W. Holmes.

Early Harvest. Red Astrachan. American Summer Pearmain. Yellow Bough.	Holland Pippin. Maiden's Blush. Gravenstein. Fall Pippin. Peach Pond Swg.	Esopus Spitzenburg R. I. Greening. Baldwin. Am. Golden Russet. Roxbury Russet. Ladies' Sweeting.
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71. Orange Co., N. Y.—Report from L. M. Ferris.

Early Harvest. Red Astrachan. Early Strawberry. Yellow Bough.	Fall Pippin. Porter. Dutch Mignonne. Gravenstein. Autumn Sweet Bough.	Newtown Pippin. Esopus Spitzenburg. King Tompkins Co. Baldwin. R. I. Greening. Ladies' Sweeting.
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72. Delaware Co., N. Y.—Report from William Stenson.

Early Harvest. Early Joe. William's Favorite. Golden Sweet.	Twenty Ounce. Autumn Bough. Late Strawberry. Sops of Wine. Jersey Sweeting.	R. I. Greening. W. Seek-no-further. Esopus Spitzenburg. Golden Russet. Golden Pippin. Tahman Sweeting.
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73. Fayette Co., Pa.—Report from J. T. Smith.

Early Harvest. Yellow June. Carolina Red June. Yellow Bough.	Fall Pippin. Ashmore. Rainbo. Pumpkin Sweet.	Baldwin. R. I. Greening. Wine Sap. Esopus Spitzenburg. Roxbury Russet. London Sweet.
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74. Geauga Co., Ohio.—Report from Geo. W. Dean.

Red Astrachan. Summer Rose. Summer Queen. Yellow Bough.	Lowell. Maiden's Blush. Twenty Ounce. Autumnal Swaar.	Peck's Pleasant. R. I. Greening. Baldwin. Red Canada. Hub. Nonsuch. Danver's Winter.
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75. Cass Co., Ind.—Report from James C. Bennett.

Early Harvest. Carolina Red June. Summer Queen. Lift Sweeting.	Rainbo. Wine Apple. Maiden's Blush. Autumn Sweeting.	Yellow Bellflower. Wine Sap. Rau's Janet. Vandevere of N. Y. Red Sweet Pippin.
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76. Cass Co., Mich.—Report from T. B. Seely.

Red Astrachan. Early Harvest. Kewick Codlin. Yellow Bough.	Maiden's Blush. Rainbo. Fall Pippin. Holland Pippin. Jersey Sweeting.	Baldwin. R. I. Greening. Swaar. Esopus Spitzenburg. Golden Russet. Tahman Sweeting.
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77. Macomb Co., Mich.—Report from A. Struter.

Early Harvest. Red Astrachan. Golden Sweet. Yellow Bough.	Lowell. Fall Pippin. Rainbo. Belmont.	Esopus Spitzenburg. Baldwin. W. Seek-no-further. R. I. Greening. Northern Spy. Ladies' Sweeting.
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General Summary.

It will be seen on looking over the whole of the 77 reports, that a few, and only a few, of the varieties of apples, are in universal favor. We have made a careful collation of the number of those who have voted for each variety, both in the whole country, and also by sections. A large number which received less than three votes, being local varieties, are omitted for want of room.

NUMBER OF VOTES IN THE WHOLE COUNTRY.

For Summer.	
No. of Votes.	No. of Votes.
Early Harvest.....65	Benoni.....5
Red Astrachan.....48	Kewick Codlin.....5
American Summer Pearmain.....14	Primate.....4
Carolina Red June.....11	White Juneating.....3
William's Favorite.....10	Sops of Wine.....3
Early Strawberry.....9	Sweet.....
Summer Queen.....6	Yellow Bough.....47
Summer Rose.....6	Golden Sweet.....13
Early Joe.....6	High Top.....8

For Autumn.	
Fall Pippin.....42	Golden Pippin.....3
Porter.....35	Autumn Swaar.....3
Gravenstein.....35	Fall Queen.....3
Rainbo.....29	Cooper.....3
Maiden's Blush.....24	Hubbardston Nonsuch.....3
Fameuse.....11	Fornwalder.....3
Lowell.....9	Sweet.....
Late Strawberry.....8	Jersey Sweeting.....16
Hawley.....5	Pumpkin Sweet.....7
Twenty Ounce.....4	Autumn Bough.....7
Smokehouse.....4	Golden Sweet.....6
Fall Wine.....4	Northern Sweet.....3
Holland Pippin.....4	

For Winter.	
Baldwin.....46	Rome Beauty.....5
R. I. Greening.....43	Fornwalder.....4
Roxbury Russet.....28	Lumber Twig.....4
Esopus Spitzenburg.....20	Monmouth Pippin.....4
Yellow Bellflower.....14	Belmont.....4
Northern Spy.....14	Ridge Pippin.....4
Hubbardston Nonsuch.....13	Orley.....3
Rau's Janet.....13	White Pippin.....3
Wine Sap.....12	Red Canada.....3
Westfield Seek-no-further.....11	Pryor's Red.....3
Golden Russet.....11	Rainbo.....3
Smith's Cider.....10	Sweet.....
King of Tompkins Co.....10	Tahman Sweeting.....24
Peck's Pleasant.....9	Ladies' Sweeting.....21
Newtown Pippin.....8	Winter Sweeting.....3
Swaar.....7	Broadwell.....3
Jonathan.....6	

NUMBER OF VOTES BY SECTIONS.

It will be useful to subdivide the general list into sections, to show at a glance, the most popular varieties in special localities. It will be well, however, for the reader to look through the reports themselves, to judge of the kinds

adapted to any particular locality. Thus, for example, the Baldwin is preferred in Northern New-England, while along Long Island Sound it is ranked third. Similar differences occur between northern and southern New-York.

Votes in New-England States.

SUMMER.	
Early Harvest.....14	Sops of Wine.....3
Red Astrachan.....13	Sweet.....
William's Favorite.....7	Yellow Bough.....15
AUTUMN.	
Porter.....13	Maiden's Blush.....3
Gravenstein.....13	Sweet.....
Fall Pippin.....8	Golden Sweet.....6
Fameuse.....4	Northern Sweet.....3
WINTER.	
Baldwin.....17	Peck's Pleasant.....6
R. I. Greening.....14	Esopus Spitzenburg.....3
Roxbury Russet.....14	Northern Spy.....3
Hubbardston Nonsuch.....7	Ladies' Sweeting.....9

Votes in New-York State.

SUMMER.	
Early Harvest.....17	Early Strawberry.....3
Red Astrachan.....13	Primate.....3
Amer. Summer Pearmain.....4	Sweet.....
Early Joe.....4	Yellow Bough.....16
AUTUMN.	
Fall Pippin.....14	Twenty Ounce.....3
Primate.....13	Jersey Sweeting.....2
Porter.....11	Autumn Bough (S).....6
Hawley.....4	
WINTER.	
Baldwin.....17	Swaar.....4
R. I. Greening.....15	Hubbardston Nonsuch.....4
Esopus Spitzenburg.....11	Westfield Seek-no-further.....3
Roxbury Russet.....7	Newtown Pippin.....3
Northern Spy.....6	Tahman Sweeting.....10
King of Tompkins Co.....6	Ladies' Sweeting.....6

Votes in New-Jersey, Pennsylvania, Delaware, Maryland, and Virginia.

SUMMER.	
Early Harvest.....9	Sweet, Yellow Bough.....2
Red Astrachan.....7	Green Sweet.....3
American Summer Pearmain.....4	
AUTUMN.	
Rainbo.....7	Maiden's Blush.....4
Porter.....5	Smokehouse.....4
Fall Pippin.....5	Jersey Sweeting.....3
WINTER.	
Baldwin.....9	Fornwalder.....4
R. I. Greening.....6	Northern Spy.....3
Smith's Cider.....6	Ridge Pippin.....3
Roxbury Russet.....4	Ladies' Sweeting.....4

Votes in Ohio and Indiana, including Adrian, Mich.

SUMMER.	
Early Harvest.....12	Summer Queen.....4
Red Astrachan.....6	Benoni.....4
Summer Rose.....4	Sweet Yellow Bough.....3
Carolina Red June.....3	Golden Sweet.....5
AUTUMN.	
Rainbo.....12	Gravenstein.....3
Fall Pippin.....10	Porter.....3
Maiden's Blush.....8	Lowell.....3
Late or Autumn Strawberry.....3	Jersey Sweeting.....5
Fall Wine.....3	
WINTER.	
Yellow Bellflower.....6	Wine Sap.....3
R. I. Greening.....5	Smith's Cider.....3
Belmont.....5	Rome Beauty.....3
Westfield Seek-no-further.....4	Broadwell (Sweet).....5
Rau's Janet.....3	Tahman Sweeting.....3

Votes in Wisconsin, Illinois, Iowa, and Utah.

SUMMER.	
Early Harvest.....8	Kewick Codlin.....3
Red Astrachan.....6	High Top Sweet.....5
Carolina Red June.....4	
AUTUMN.	
Rainbo.....7	Fall Pippin.....3
Maiden's Blush.....5	Pumpkin Sweet.....3
Fameuse.....4	
WINTER.	
Yellow Bellflower.....6	Golden Russet.....3
Rau's Janet.....5	Westfield Seek-no-further.....3
Wine Sap.....4	Tahman Sweeting.....6

Votes in Missouri, Kentucky, Tennessee, Mississippi.

SUMMER.	
Early Harvest.....5	Red Astrachan.....3
Carolina Red June.....3	Sweet, Yellow Bough.....3
AUTUMN.	
Fall Pippin.....2	Fornwalder.....2
Gravenstein.....2	
WINTER.	
Rau's Janet.....4	Lumber Twig.....2
Yellow Bellflower.....2	Pryor's Red.....2
Wine Sap.....2	

OSAGE ORANGE HEDGES.—J. N. Collett, Shelby Co., Ind., set Osage Orange plants one foot apart, cut back the first season's growth to within six inches of the ground, and so continued to cut every June and September to within six inches of the former cuttings, until sufficiently high, when only the September cutting was continued, to keep the hedge in reach. He finds it a protection against all stock except hogs. He regrets not having planted more closely.

How to Transplant Evergreens.

In the more Northern States, the first half of June is an excellent time for the setting of evergreens. They may, indeed, be removed at other times, with safety, if the work be well done. A nurseryman in our vicinity transplants them in every month of the year, except in mid-winter, with impunity. He does it with great care, keeps the roots out of the ground but a few minutes, and in dry weather mulches the ground. He seldom loses a tree; yet, like a sensible man, he holds, with all experienced planters, that, as a general rule, the best time for re-setting is in the early Summer, when the tree is just bursting into its first growth.

The physiological reason for this, so far as we know of one, is as follows: An evergreen tree is always clothed with foliage, and if dug up and reset early in the Spring, while in a dormant state, the leaves make an immediate and constant demand on the roots, which they, in their mangled and inactive state, can not meet. In this they differ from a deciduous tree, which, if transplanted when in a dormant state, has no foliage to suck up and evaporate the moisture from its roots. But if we wait until the evergreen is fully roused, and is just starting into vigorous growth of root and branch, it may be taken up and re-set without injury. The roots soon heal over, and push out new fibers into the soil, and root growth proceeds so rapidly that evaporation does not exhaust it. In short, the removal is performed at the time when the tree is best able to bear the shock.

A few words now in detail, as to the manner of doing this work well. Trees may be taken at once from the forest or open field, if much care be used. The holes to receive them should be previously dug, making them of generous size, and, if the soil is not good, bring in from the garden two or three bushels of fine earth for each tree. Then choose a cloudy day—a moist one, if you are water-proof—for the digging up and re-setting. Take a sharp spade and a few old mats; hitch up Dobbin and drive to the woods—though if the trees can be found in an open field, they will be better furnished with dense branches to the ground, and will be more sure to live. Do not dig up the tree as you would a post, but cut a large circle around it, so as to include as great a mass of roots as two or more can lift into the wagon; and all the earth you can preserve about the roots, will be so much gain. Having dug up the desired number of trees, cover the roots with your old mats, and drive homeward with care and dispatch. Now loosen up the soil in the holes, pare off smoothly the bruised roots, set in your trees, spreading out the roots in all directions, and filling the interstices with fine mold. When each tree is about half planted, pour in half a pail of water and let it settle; then fill up with earth. After all the trees are set, it will be advisable to drive in temporary stakes on the windy side of any tall specimens, to prevent their being blown about violently and loosened at the roots. An excellent article with which to tie the trees to the stakes, so as to prevent chafing the bark, is cloth *lining* from the tailors' shops.

Here, transplanting, as commonly performed, ends,—but an indispensable part of the process remains, viz: mulching the roots. Leaves are the very best material for this purpose, but old tan-bark is good, and straw will answer well. Put on a layer an inch or two deep. Something of the sort should be used, as it will save the necessity of subsequent waterings, and will al-

most ensure their living, and making a vigorous growth, even during the first season.

The above directions apply particularly to the transplanting of evergreens from the wood-side and field. There are advantages, however, in procuring them from the nurseries. Here your range of varieties is greater. They are generally better shaped specimens. They have been transplanted several times already, and, having thereby formed large mats of fibrous roots, are quite sure to live.

For evergreens which have to be set in windy quarters, we strongly advise the planting of a few "nurse-trees," (the American arbor-vitæ, for example,) on the stormy side, to break the violence of the wind. If they are not protected in some way, they will be battered to pieces, and become shabby, one-sided specimens. Keep the nurses there for several years, until the favorite tree is well established and vigorous, then they may be removed.

Desirable Evergreens.

There is as great a choice in conifers as in other trees. Some are lank and scrawny, and straggling; others are only half-hardy, and need protection in Winter; others are altogether too tender for northern climates; and others still are peculiarly subject to the attacks of insects.

Among our readers there are many who are just establishing small places, and who wish to plant a few of the very best evergreens, and only such. Then there are others who have large grounds to embellish, and who want to procure every known species and variety that is really hardy and desirable. We will now try to accommodate both classes, by giving a list and short descriptions of those with which we are acquainted, placing the best at the head of the list, and the others in their supposed order of merit. Our friends can then select as many as they desire for their particular uses.

HEMLOCK SPRUCE. (*Abies canadensis*).—Native of all our northern hills, and too common to be generally appreciated, it is, notwithstanding, the most beautiful of evergreens. The Deodar and Lebanon cedars, the *Araucaria*, the Norway Spruce, and others, have their several excellences, but, all things considered, they must yield the palm to this. Let us see what can be said of it. Hardy, of fair growth when well established, color vivid green, unchanged by hardest frosts, and the style of branch and leaf superbly graceful. Nothing can exceed the beauty of its new growth in early Summer. It is thought to be hard to transplant; and so it is, if taken up from the woods and carelessly handled. If one can not give time and pains to do the work well, let him buy his trees from the nurseries, and then they will be sure to live.

THE NORWAY SPRUCE. (*Abies excelsa*).—Norway has given to mankind three superior things: a grand spruce, a first rate maple, and the world famous violinist, Ole Bull. This spruce is fast becoming the most widely planted tree of our times, unless we except the old Balsam Fir. Its origin ensures its hardihood. Few trees can be more easily transplanted; and even Young America will not complain that its growth is slow. Well did the botanists style it *excelsa*, for it often towers 150 feet high. No Winter's cold changes its bright green color. It naturally takes a fine pyramidal shape, seldom needing any pruning to improve its symmetry. Less graceful than the hemlock, it never looks too coarse for the finest lawn, yet it is bold enough

for the most picturesque scenery. It also makes a strong hedge or protecting screen.

THE WHITE PINE. (*Pinus strobus*).—often styled "Weymouth" pine, in the catalogues. This tree has sometimes fallen into disrepute with planters who have set it in poor soil, or where it was overshadowed by other trees. Give it sunlight, abundance of room to spread itself, and a deep, moist loam, and it will win a good name from everybody. No foreign pine surpasses it. The Bhotan (*excelsa*) is quite graceful, with its long, silky, silvery green foliage; yet it has a sort of languishing, affected air; and withal is not hardy north of Albany, N. Y. And if it were, we should rank it second to the white pine. This last is hardy everywhere, bears transplanting well, and is always green; it is too large for city lots and for village door yards; its appropriate place is at the outskirts. It makes a noble park-tree.

AUSTRIAN AND SCOTCH PINES. (*Pinus Austriaca*, and *P. Sylvestris*).—We place them together, because their merits are similar, their foliage not very unlike, and because they look well when planted in company. The dark sea-green of the Austrian sets off finely the bluish green of the Scotch.

THE CEMBRAN PINE. (*Pinus Cembra*).—A most worthy member of the great pine family. So far as beauty is concerned, it stands above the Scotch and Austrian, but as it is of slower growth, and, we believe, a smaller sized tree, it will probably be less popular. It is sometimes called the Swiss Stone pine, as it abounds on the Alps, and nearly all the mountainous regions of Central Europe. It is certainly hardy in Central New-York, and will doubtless prove so everywhere. It is more compact and regular in its habit than any other pine of our acquaintance, and should be in every collection.

SIBERIAN SILVER FIR. (*Picea pichtha*).—Here is the best of the Firs for northern people. It is less prim and precise than the European, but equal in fulness and richness of foliage to the best specimens of the native Balsam, and then it does not, like the last-named, become meagre as it becomes old.

EUROPEAN SILVER FIR. (*Picea pectinata*).—An exceedingly neat, symmetrical, and lofty tree, sometimes attaining the height of 150 feet. Yet it is hardly suitable for northern climates. From Rochester, all through to Philadelphia, it is very apt to lose its leader in the Winter. Whoever has patience and skill in abundance would do well to try it.

THE BALSAM FIR. (*Picea balsamea*).—It will be hard work for the critics to write down this tree. They say it becomes "a shabby fellow, after it is twenty years old, whose bad clothing a well-trained dog would bark at, as belonging to a beggar." Not always, good friends, as several within range of our window at this moment bear testimony. In some regions and soils, it is more liable to attacks of insects than in others, and when so affected, it has a pitiable look. But where it thrives well, it is certainly worth having. We think it is freer from disease and insects at the North than in the Middle States.

BLACK AND WHITE SPRUCE. (*Abies nigra* and *A. Alba*).—Not equal to their Norwegian cousin, yet desirable in a large collection. The foliage of the White is sometimes double, and heavy, and gracefully pendulous; such specimens are hardly inferior to any evergreen.

THE ARBOR VITÆ. (*Thuja*).—There are many species of this tree. The *Golden* is, perhaps, the most beautiful, yet, unfortunately, it is tender

north of this city. The *Siberian* is the finest hardy species that has yet been fully tested. Its foliage is more compact, heavier, and darker in color than the American, and does not brown up in Winter. When it becomes cheaper, it will be the favorite plant for green hedges and screens. It would be unfair to deny a word of commendation for that excellent drudge, the common American arbor vitæ. With care in selecting specimens and in the after treatment, it often makes a handsome tree. For hedges and screens, it serves an excellent purpose, and grows very rapidly.

THE JUNIPERS. (*Juniperus*).—These trees deserve more attention than they receive. The common American and Swedish are hardy as far north as Albany, N. Y.; they are quite distinct in habit from all other trees, and being of medium size, are well suited to small grounds, cemetery-lots, and other such situations. Some varieties are straggling and loose in their style of growth, but as a general rule they assume a tapering, conical shape, resembling a miniature poplar. An occasional tying in of the branches, and a little clipping of the extremities, improve their appearance.

The *Red Cedar* belongs to the juniper family. It varies much in form and color—being sometimes compact and pyramidal, at others open and spreading; sometimes a dark grass green, and again tinged with blue. It becomes rusty in Winter, and is wont to lose its lower branches, and to become shabby on the sides exposed to severe winds. Give it a partially sheltered aspect, set it in a sandy loam, and it will often make a handsome tree.

There are several other desirable evergreens, which we have not space to describe, or of which our personal knowledge is so slight that we can not speak with much confidence. *Pinus ponderosa*, from Oregon, is a noble tree, resembling the Austrian, though of still larger growth, throwing out its giant arms in a very grand way. Our own specimens, four or five feet high, are doing well; but Mr. Sargent, the Apostle of Evergreens in America, warns us that they will by and by topple over, from their too rampant growth, and their habit of working the crown of the root out of the ground. They will perhaps require artificial support. *Pinus pumilio* seems to be a dwarfish variety of the Scotch, hardy as an oak. *Pinus Benthamiana*, *P. Pyrenaia*, *P. Laricio* and *P. Lambertiana*, are reported hardy in some parts of New-England, and on the middle Hudson, and are fine trees. *Thuopsis borealis*, or Nootka Sound Cypress, is undoubtedly hardy, having stood out in the latitude of Albany uninjured. It has the general habit of the Arbor Vitæ, but is more feathery and graceful, and is of a bluish green color. *Cupressus Lawsoniana*, *Picea nobilis*, *Thuja pendula*, and several others promise well, but we are unable now to say more than this with certainty.

Dry Rot in Living Trees and Vines.

The London Gardeners' Chronicle, noticing the unusual prevalence of disease among grape vines in England this year, attributes it in part to the effects of dry rot. This great destroyer of timber, as is generally known, consists of a minute fungus, which, by its growth, disorganizes the substance of the wood, making it brittle and worthless. The Editor of the Chronicle, Prof. Lindley, is convinced by repeated observations, some of them made as far back as 1848, that this fungus may, under certain con-

ditions, establish itself upon the roots of living plants. It first attacks those which, from other causes, have lost their vitality, and gradually advances until the whole of the roots are destroyed, and the plant perishes. Rotten wood lying in the ground may, at first, be the seat of the Fungus, from which it may extend to an unhealthy root. In the case of two grape vines recently inspected, the dry rot was plainly the cause of their death; where it originated, was not ascertained. The presence of excessive moisture or any cause tending to weaken the vitality of the roots, would render vines or trees more liable to attack; hence the importance of a well drained border. It may also be worthy of consideration whether the use of chip dirt in the grape border is not objectionable, for fear of breeding the destructive fungus.

Slugs in Strawberry Beds.

It sometimes happens that strawberry patches mulched with saw-dust or tanners' bark, become infested with worms—though, in our experience, this seldom happens in the use of bark. But when this occurs, if the bed is an old one, we should advise breaking it up as soon as possible, killing the slugs which come to light, and working into the soil a good dressing of ashes or lime. If the worms are not very numerous, watch where they burrow, and then give a good soaking of tobacco water. Make the decoction at the rate of one pound of tobacco stems to three gallons of water; let it soak half a day, stirring it occasionally, and then apply with a watering pot. We have known this to exterminate such "varmints" pretty effectually. Where tobacco stems are not at hand, try salt and water, at the rate of half a pint of salt to two gallons of water. The strawberry will endure salt about as well as asparagus. Sprinkle the brine on the infected districts at evening.

Thin Out the Plants.

We can not allow the month of June to pass without preaching our annual sermon on the above text. Every body sows more seed than he knows it is best to grow where it is sown—he does it supposing that some will prove poor, that others will be eaten by worms, etc., etc. Yet when the plants come up fresh and green, and grow luxuriantly, he finds it very hard to pull up the beautiful things and throw them away. But what would become of those carrots, and beets, and parsneps, if they were allowed to stand crowded together as they first come up? They would look quite like pipe-stems. Let them be thinned out several times early in the summer, and in the final thinning, leave them from two to four inches apart. So with cucumbers, melons, squashes, and Lima beans. Three plants are enough to leave in a hill. This number will make a more vigorous growth, and will mature their products quicker than five or six plants to a hill.

Nor is thinning less needful in the flower-garden. This is important even where one wishes to grow flowers in masses. Small growing plants, such as candytuft, clarkia, etc., may be allowed to stand four inches apart, and larger sorts, such as asters, marigolds, and larkspurs, six or eight. As masses, they will grow better and bloom better than if crowded. But if one wishes to raise specimen plants, they should stand much further apart, say from eight to twelve inches. They will then form miniature

trees, clothed with foliage and flowers from the ground to the top of the plant. If any one doubts the wisdom of so thinning out his plants, let him once try it and report. We know in advance what his report will be.

Raising Cabbages.

Let no one despise this ancient vegetable, so palatable and useful to man and beast. Some sorts are coarse and rank, fit only for the cow-yard, but others are delicate and crisp, hardly inferior to the cauliflower, fit for the table of a king. Among early varieties, the old *Early York* has had hardly a competitor for a hundred years past. The heads are rather small, firm, almost heart-shaped, and of delicious flavor. *Early Nonpareil* is also excellent. *Early Dutch* comes a trifle later, and is first-rate. Then follows the *Drum-Head* or *Flat Dutch*, with its large, spreading, flattish head, and of close, firm texture. If seeds of it are sown in May, the heads will mature in October, and keep well all winter. It is a favorite market sort, bringing, on an average, \$2 50 a hundred. For family use, we confess the *Savoy*s have our preference, especially the curled leaf varieties. Not attempting to mention all the good sorts, we must not, however, forget the *Red Dutch*, the favorite for pickling, and a capital sort for winter consumption.

Can it be that any body in this enlightened land does not know all about raising cabbages? That, for the early sorts, the plants should be started in a hot-bed, and transplanted as soon as the May frosts are over? That, for later sorts, the seed-bed may be made in any warm spot, and the plants be re-set, along through June and July, as may be convenient? Every body knows that the cabbage likes a fat soil. Each plant wants two to three feet square of ground to spread itself in, according to the size of the variety. The ground should be frequently hoed, hilling up the earth around the stems to support them. For details in transplanting, see an article on the subject, in the *May Agriculturist*, p. 140.

In some seasons the cabbage-fly is troublesome. Give him soot, ashes, or air-slaked lime, sprinkled on the leaves before sunrise. Or, set a hen-coop with young chickens near the patch, and they will feast upon the insects. Cabbages are also subject to club-foot or stub-foot, the roots having a swelled or knobby look, and the plants being weak and unhealthy. Some ascribe this to a grub, others to the growing of cabbages too long on the same ground. Whatever the cause, avoid it by choosing a new spot every other year. That wicked grub which eats off so many young plants by night, just above the ground, may be headed off by sprinkling lime around the plants, or by surrounding each stem with a ring of thick paper an inch wide. During the heats of mid-summer, it is well to water the plants with slops from the kitchen sink.

A Cabbage Tree.

For a year or two past we have met with notices in our exchanges, of a wonderful cabbage tree, said to be growing in Calaveras Co., California. It was described as having grown during five years from an ordinary cabbage plant, to near fifteen feet high, and as having borne fifty or sixty heads of cabbage last year. This appeared so like a humbug, that no notice was taken of it. The last No. of the *Country Gentleman* contains a letter from James Hepburn, the

owner of the curiosity, enclosing seeds of the veritable tree, which he says is an evergreen, and appears to grow the whole year. When the trees from this seed are fairly established, we shall report.

The Egg Plant—(*Solanum Esculentum*.)

This vegetable has not yet attained the popularity it deserves. It is quite extensively grown by market gardeners, near cities, but we have seldom seen it on the farmer's table. Some have not yet learned to love it, more's the pity, for one accustomed to the taste, finds it, if well cooked, almost equivalent to both meat and vegetables. The plant is of African origin, of too tender habit to be grown in open ground from the seed at the far North; but by starting in the hot-bed, or in pots in the house, six or eight weeks before corn planting time, it can be transplanted in June, and brought to maturity.

In this latitude there is a chance that plants may be grown to bear from seed, sown even as late as June 1st. We have generally found it most convenient, to obtain a dozen or two plants from those who grow them for sale.

The Egg Plant needs a very rich soil, with warm exposure. Fork into the ground devoted to it, a liberal supply of horse manure, and set the young plants, three feet by two apart. Hoe frequently throughout the season, and hill up gradually until the blossoms appear.

Under good treatment the fruit will grow to the size of a large muskmelon. When it has attained about the size of a goose egg, it is ready for cooking, and continues good until its deep purple color changes, and the seeds turn brown. They are cooked in various ways. Usually, slices one-fourth to one-half an inch thick are fried in butter or lard. This makes too rich a dish for weak stomachs, and not over-healthy for any; indeed frying is a poor way of cooking any food. Another way is, to simmer them with plenty of water, until quite tender, remove the skin and mash them smooth, incorporating with the pulp grated bread crumbs, and seasoning with marjoram and pounded cloves. Then brown the whole in the oven. Or, cut the plants in halves, remove part of the middle, fill with stuffing as for a turkey, and bake. *

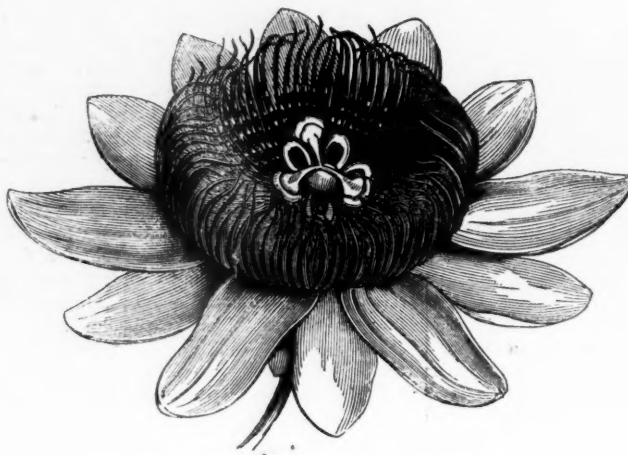
Raspberry and Blackberry Plants.

The crop of fruit next year will depend much upon the number and vigor of the new shoots grown this season. Persons ignorant of their nature have hoed up all young canes, as so many trespassers. Of course they got no fruit the following year, as the shoots only bear the second season, and die in the Fall. Others, again, allow too many canes to make a weakly growth, with not enough vigor to produce a full crop of fruit. Avoid both extremes, leaving just sufficient good strong shoots to keep the patch in a vigorous condition. The oldest planted raspberry roots in the writer's grounds, were set 15 years ago, and they are now the best, yielding large strong canes which bear abundantly.

Replace Weak Plants.

If every beet, carrot, melon vine, and other plant in the garden were of strong growth, the yield would often be nearly doubled. Owing to defective seeds, improper planting, injury from insects and other hindrances, from one-fourth to one-third or more of the plants in a garden often

fall below the normal standard. This can be partially remedied while thinning the plots. First, of course, be careful to leave the plants of most vigorous growth, even though they stand a little outside of the prescribed distance apart. Then remove spindling specimens, select the best from those which are to be removed and transplant them so carefully, that they may go on growing without check. This will often prove profitable, especially with melons and other vines, where a large produce is yielded from a single seed. In some cases it would pay to make over a whole bed, and plant new seeds to take the place of the stunted plants which had been started too early. Where the first roots of a plant have been developed under unfavorable circumstances, as coldness or wetness of the soil, etc., they are weak, and poorly fitted to nourish the plant, which will, in consequence, remain dwarfed for a considerable time. For this reason late planted vegetables often yield better than those sown at the opening of Spring.



The Passion Flower.

Our artist has given a faithful representation of the form of this beautiful flower. It needs the addition of the various shades of color to give some idea of its richness, but no artist's skill can equal the elegance displayed in the flower itself. The specimen shown above is new to us, the name given was *Passiflora Descaine*. It is singularly beautiful in its shadings, and one of the finest ornaments of the hot-house. Being a tropical plant, it needs stove heat and a moist atmosphere for its development; with these conditions supplied, it grows with great luxuriance, the vine extending fifty feet, or more. It blooms freely three or four times in the season. The vine from which the above was taken, is now (May 1) in flower. It is propagated from cuttings, which root readily in the hot-house, and the vines may afterward be grown in pots, or better in the bottom soil of the house.

There are several other species of Passion flower, a few of which are natives of this country, and not particularly attractive in vine or flower. The name was given from a comparison of the various parts of the blossom to the instruments used in the crucifixion of Christ. According to tradition, the vine was common in Judea, but no bloom had ever been noticed upon it until after the crucifixion; when, it is said, the disciples were astonished to see it unfold, and display the crown of thorns, the cross, and the nails, and they at once named it the Passion flower. This, of course, is only fanciful, but it

adds not a little to the interest with which this wonder of the floral creation is regarded.

Adorning the Rough Places.

ANNUAL CLIMBING PLANTS.

Many of the rough places about the buildings, fences, walls, unsightly rocks, etc., may be covered with a mass of bloom, from seeds sown or plants set out even so late as the present month. Here are a few of the plants for such purposes, omitting the perennials whose roots should have been set out in April or May.

MORNING GLORY, (*Convolvulus major*), is a vigorous rapid growing climber, bearing any amount of harsh treatment. It often attains a height of 20 feet in a season, and blooms from July to September, but unfortunately the flowers are only open for a few hours in the morning, unless in cloudy or rainy weather. The foliage is abundant, and forms a good screen over

an unsightly building, rustic arbor, or lattice work. The vine will climb a string or wire in any direction. Its large tubular or funnel shaped flowers, of white, blue, purple, pink and variegated colors are quite conspicuous. Sow the seed one half inch deep any time in May or June. The dwarf variety, (*Convolvulus minor*), a smaller sort, runs from 6 to 10 feet, but branches very much, and will form a dense mat of foliage and fine bloom.

THE CYPRESS VINE (*Ipomea quamoclit*) is the

ladies' favorite. Graceful in foliage and habit, with a neat and attractive flower, it may well claim a conspicuous position near the house, or in the frequented portions of the flower garden. Its feathery leaves give little concealment, as a screen, and on this account it is usually trained upon wires, or strings, attached to the top of a central stake, say 10 feet in height, and fastened to short stakes set in a circle around the base of the stake, 2 to 6 feet distant from it. This gives a cone 4 to 12 feet broad at the bottom, and running up to nearly a point at the top, say 8 to 10 feet high. The trellises may be of any desired form, however. Sow the seed in this circle, or elsewhere, after soaking it in tepid water for 12 hours. Sow from the middle of May to first of June, covering one half inch. It is useless to sow the seed before the ground is warm, and they are a long time in vegetating unless soaked. The flowers, of funnel form, deep crimson, or white, open in the morning, and continue in bloom from August until killed by frost.

COBEEA SCANDENS.—A comparatively new perennial plant from Mexico, and requiring the protection of a green-house during Winter. Sown in a warm situation in May, or even in June, it will still run 30 to 50 feet, and flower in Autumn, retaining its bloom after considerable frosts. It succeeds best, however, started in a hot-bed, and planted out early in June. Its flowers are bell-shaped, of large size, purple, and very attractive. A valuable climber for covering sides of stone, brick, or wooden houses. It has run over 100 feet (and it is said over 200

feet,) in a single season, under favorable circumstances. But few persons can get seed this year; we imported a large lot, at great cost, but it was all called for at an early date. Those who can not get seed this year, should bear it in mind next season. We are raising all we can, and shall also import a good supply for next winter's distribution.

NASTURTIUM (*Tropaeolum majus*).—This is a sort of trailing plant, extending 4 to 6 feet, and well calculated to cover rubbish of stones, earth, walls, etc. The dwarf varieties are mere bushes. Sow at any time in June, covering one inch. Besides fine foliage, bright scarlet and yellow hood-shaped flowers; the green seed capsules furnish very excellent pickles.

CANARY-BIRD FLOWER, (*Tropaeolum peregrinum*), runs more to vine than the nasturtium, and produces bright yellow flowers from August until killed by Autumn frosts. Sow in a light soil with a sunny aspect.

THE SCARLET RUNNING BEAN, (*Phaseolus multiflorus*), gives a showy flower and good fruit. It is also of rapid growth, running 10 to 15 feet in a season, and it is often used to cover a screen. Plant from middle of May to June 10th, half an inch deep. The blossoms frequently drop in hot, dry weather, but set pods in Autumn.

Mock Orange, Balloon Vine, Sweet Peas, Purple Hyacinth Bean, Fumitory (*Corydalis*), Thunbergia, etc., may be added to the list if not already large enough, all of which may still be sown.

Century Plant on Exhibition.

We have now, (May 11,) on exhibition at our office, a fine specimen of the **AMERICAN ALOE**, (*Agave Americana*), commonly called the "Century Plant," because popularly supposed to bloom only once in a hundred years. (This specimen will probably remain here until after June 1st, and may be seen by all who find it convenient to call.) It was grown in the garden of Capt. D. Hitchcock, near New Orleans, La., and is exhibited here by Mr. D. Bidwell, who has brought with him a number of smaller plants, and one very large one, which had commenced to send up its flower stalk, and was to have been exhibited in a glass structure. But unfortunately, both for Mr. B. and for the public, the flower stalk was broken by accident, in removing it from the ship after its arrival. This was only 6 feet high at the end of March, but had grown to 25 feet by April 25th, when it was shipped. It grew 3½ feet during the passage. The specimen at our office is very fine, about 30 years old. Another large specimen it is hoped will bloom next season, and is to be taken to the "World's Fair" at London in 1862. The accompanying cut gives an imperfect view of the mature plant when in bloom, with a flower stem 40 feet or more in height. In shape it resembles an enormous candelabrum of pyramidal form, bearing, on the arms or branches, clusters of greenish yellow flowers, which are produced for two or three months in succession.



INHABITANTS OF A SALT WATER AQUARIUM.—1. *Edwardsia vestita*; 2, 3. *Gemaster equestres*; 4. *Cribrella Oculata*; 5. *Asterina gibbosa*; 6. *Palmpes membranaceus*; 7. *Palæmon serratus*.

For the American Agriculturist.—(See page 150.)

My Salt Water Aquarium.

It is about two years since I commenced keeping a salt water aquarium. Like the fresh water aquarium described in the May *Agriculturist*, it holds about twenty gallons of water, but the ends as well as the sides, are of glass. The principal difficulty with respect to a marine aquarium is the obtaining of pure ocean water, without which experience tells me there is no hope of real and gratifying success. There is no other difficulty, however, and there are few things more beautiful or more interesting than this miniature representation of the wonders of the deep. The best of all marine plants or weeds for the purpose of aeration, is the common sea lettuce, so abundant on all our coasts. It is best to obtain it, however, from below low water-mark, where it has been constantly submerged, as it must be in the tank. The small red and variously colored sea weeds may be added for the sake of their beauty and ornamental character, but they should be removed as soon as they show signs of decay. No sea weed that is loosened from the rock on which it grew, is of any value whatever. It will never take root again, or vegetate. This must be borne in mind. Plenty can be found, however, adhering to pebbles, oyster shells and small pieces of rock, and these must be placed bodily in the aquarium, having first been cleared of any small shell fish. And it must be remembered also that whatever water escapes by evaporation, must be replaced by pure fresh water, for the obvious reason that the salt remains in the tank, and the water only diminishes. In all other respects than these, the

commencement and general management of salt and fresh water tanks are the same.

And now step with me into the conservatory and examine my salt water aquarium. Perhaps the most curious of its contents will to you be the sea anemones. They are not flowering plants, although they look as though they were. They are animals, properly so called. Drop a morsel of fish, or even of raw meat into the center of that seeming floral crown, and those countless tentaculæ will instantly close upon it, for there is a somewhat capacious mouth, and on the florescence again expanding, nothing will be seen of the food. Firmly as its base now adheres to that rock, to-morrow it will probably be at the other end of the tank, or half way up the glass side. That variegated and chequered one, with trunk-like tentaculæ is a native of the coast of England; while that one, with scarlet base and long white tentaculæ tipped with amber, came from the warmer clime of Florida. Those shy, fidgetty, restless fellows are hermit crabs, the larger and more gorgeous one from Key West, the smaller and more soberly clad from Boston harbor. Those varieties of crabs, those shrimps, snails, and small fish of different kinds, are the usual occupants of every small bay along the coast. But there are my pets—a pair of sticklebacks. They have a history.

There is now no difference of form or color by which the male can be distinguished from the female. But in breeding time they are as unlike as possible. Last year they made their nest—or rather the male made it—in that tuft of sea lettuce. About a fortnight before he commenced that operation, a deep blood color became visible between his scales, giving him the

appearance of being injured and bleeding. Soon the whole under part of his body from lip to dorsal fin, that now is like burnished silver, glowed with the most brilliant vermilion conceivable, while his back was gorgeous with emerald and gold and ultra-marine blue, and his eyes were radiant as sapphire. Simultaneously he became so pugnacious, that no other fish had any peace in the tank with him. His nest was formed with immense labor and care, with an opening through it, and took him a fortnight to build. After the female had deposited her spawn, he kept watch and ward over it, in his brilliant livery, for eighteen days, when the young ones appeared. I could not count them, but estimated them at upwards of a hundred. During the first two or three days, if they strayed an inch or two from the nest, he took them in his mouth and returned them to it. After eight days, apprehensive that he would then devour them, I removed him from the tank, as I had previously the female. I did wrong. A number of shrimps, which his pugnacious vigilance had kept in their hiding places, soon came forth, and the young sticklebacks became their prey. However, I acquired knowledge for my next trial.

R. A. West.

Staten Island, N. Y.

For the American Agriculturist.

Hints on Choosing and Preparing Coffee.

BY MRS. E. F. HASKELL.

The principal kinds of coffee in market are: the Mocha from Arabia, the Java from the East Indies, and the Rio from the tropical regions of America. The first named sort is the best in use. The bean of Mocha coffee is of a dark yellowish color, and smaller and rounder than any other. Old Government Java stands next in excellence, and is good enough. The seeds are larger than the Mocha, of a pale yellowish color. The seeds of the Rio variety are large, and have a decided greenish tint.

The older the coffee is, before browning, the better the flavor, provided it has been properly kept. It should be stored in a dry place, not in the vicinity of substances having a strong odor. Brown sugar, spices, etc., ruin coffee if kept in the same room, unless in air-tight receptacles.

Coffee ready browned and ground, on sale at the stores, is seldom pure, and has always parted with some of the volatile oil, which in great part constitutes its value. The more recently the coffee has been browned, the better will be the beverage. In some families it is done daily, but this is hardly necessary. My method of preparing it is as follows: Wash, say five to ten pounds of coffee perfectly clean, rubbing the beans often, through several waters. This is essential, as the process of extracting the berry from the pulp in which it grew, is conducted with little regard to cleanliness. Shake it in coarse towels, until free from surface moisture, and spread it thinly to dry, *without heat*. When quite dry, spread it on bake tins, and dry it in a cool oven, until the color is a very little turned; it is then prepared for browning. Keep it in dry clean bottles, or tin canisters tightly closed, and brown small quantities as needed. The color of well browned coffee is a dark chestnut; a few burned kernels will spoil the whole.

Grind the kernels about as fine as Indian meal. My rule for quantity is to allow one tablespoonful for each person, and one for the pot, with one cup of water for each individual. For an extra cup for 15 persons allow one pound, before browning, of Mocha, or Java, to five quarts

of water. To have it clear, with each cup of ground coffee mix one-third of an egg, and sufficient water to make it into a paste. Beat the whole briskly, to a foam. Have ready the coffee pot well scalded, put in the mixed coffee, and pour on water nearly boiling hot. Let it come to a boil slowly, and as soon as the grounds rise, stir them down. Boil gently five minutes, then drain off the clear liquor, and add water for the second filling of the coffee pot. Soft water is preferable for coffee; if the water be very hard, a little soda is an improvement—do not use enough to be perceived by the taste. It would perhaps be economical to dry the whites of eggs for winter use. For this purpose, spread them as thin as varnish on white paper, and use bits of paper with the coffee; or spread the eggs upon plates, and scrape off when dry.

The following substitute for cream is preferred by some to the genuine article: Boil one quart of morning's milk, beating it constantly while heating, to keep the cream from rising. Stir a teaspoonful of flour into a little cold milk, and add it to the milk before it is boiling hot, with a large teaspoonful of sweet butter, and continue to beat it. When well boiled, take it from the fire, and when cold, thoroughly mix a well beaten egg with it, and strain it through a sieve. Beat the mixture to a foam before filling the creamer. Stir it in the cup with the coffee as the latter is poured upon it. The cream and sugar should always be placed in the cup before filling with coffee. My family always reduce every cup of coffee with two-thirds boiled milk and cream—using coffee of more than ordinary strength, which I think more pleasant and healthful than a weak cup of ordinary coffee.

About Oil Cloths.

Oil cloths make an admirable summer covering for kitchen floors, and for rooms of general household use. They are cool, neat, easily cleaned, and if of good quality very durable. In selecting a cloth, give preference to those of plain pattern. Highly wrought figures in glaring colors, not only give a tawdry effect, but are more quickly defaced by wear. Slight defects, which would scarcely be noticed in a plain pattern are brought out by contrast with high colors, and the cloth looks shabby before it is half worn out. Before purchasing, see that the paint on the cloth is well "ripened;" that is, has been on long enough to harden well. If laid on the floor when fresh from the factory, the upper surface will wear away rapidly, and the under side will be apt to adhere to the floor and peel off when the cloth is removed. It should have been kept in store six months or a year before being laid, and if longer, all the better.

Before laying a cloth, spread three or four thicknesses of newspaper evenly over the floor. Lay them side by side, with the edges meeting: if they lap, the inequalities of surface though very slight, will cause ridges in the cloth, which will wear sooner than the surrounding parts. The papers will aid in the durability of the cloth, and keep it from sticking to the floor, if it be not perfectly "ripened." It is better to let the edges lap in laying the cloth. A plain strip is left on one side, on which the other edge with the pattern carried to the outside, is to be laid to match with the next piece. If this plain strip be cut off, and the two pieces be laid with the edges meeting, dust will work into and under the crack, and look unsightly, and wear the cloth more rapidly. Always pass the tacks through a small bit of leather before driving

them; otherwise the edges will be badly torn by the tacks being pulled through when the cloth is taken up. A coat of white copal varnish applied when the cloth is first laid, and renewed every Spring will add many years to the wear.

It is not necessary to take up the cloth when carpets are put on for the Winter. Spread three or four thicknesses of paper, lapping the edges, to keep dust from working through, lay the carpet on these, and the oil cloth after a good washing in Spring, will come out as bright as ever.

A few Home Questions.

A "Farmer's wife" puts the following home questions to the readers of the *American Agriculturist*. They may appear unimportant, yet if heeded, they would save much weariness of body and vexation of spirit in the household. But she pleads the housekeeper's cause better than a man could do—hear her: "Do you, after having kindled the fire, sweep away the shavings and ashes neatly, or leave them on and around the stove? When you bring in a pail of water, are you careful not to spill it, or must some one use the mop after you every time? When you [men and boys] leave the barn yard, do you scrape the dirt from your boots, or bring it to the clean door steps, or, what is worse, into the house, and scrape it on the nicely polished cooking stove, that has cost an hour's hard rubbing to make bright? Do you ever spit on the stove, floors, or carpets? Do you leave hats and overcoats in the hall?—or do you wear them in and lay them on the table with books, papers, etc., scattering hay seed and dust over the cloth, and its contents, making it necessary to remove and replace them much oftener than would be required, if the rules of order were observed? Do you put your own clothes in their places, or leave them for some female member of the family to take care of?"

I could ask many more questions of similar import, about door yards, gates, garden walks, fences, tool houses, etc., but I will not intrude. I insist that farmers' homes ought to, and might be, as neat and beautiful, as any others if all would do their work in the best manner, or at the earliest opportunity, and not leave for another what they ought to do themselves. I know that long indulged habits are hard to overcome, but may I not hope that young men will heed advice. You would not like to have a slatternly wife; but if you are slovenly in your habits, you could not be happy with a neat one, for she would be dissatisfied and unhappy, and unless she were uncommonly heroic, you would be likely to hear of it. Perhaps you may think these things of very small moment, but I know of but few things that grieve and fret a woman more, when she is weary and dispirited, than to have all her efforts at order and neatness unappreciated; and I know too, "that more offend from want of thought, than from want of feeling." So let me say to farmers' boys, and girls too, if you wish to have pleasant, happy homes, be not only virtuous, but orderly, industrious, and neat.

LAMP LIGHTERS.—A subscriber to the *American Agriculturist* says: Uninjured straws of rye, oats, and wheat, cut in lengths of about 6 inches, are valuable for lighting candles or lamps. Placed in a glass or other small vessel, on the mantel or shelf they are quite ornamental. The above may be valuable in districts where waste paper is scarce.

For the American Agriculturist.

Poisonous Stuff.

There is a weak class of literature, the best description of which is "namby pamby." The lower sort of magazines and the sentimental newspapers which sweep the land are its chosen organs. I know of nothing so perfectly calculated to destroy a common sense view of their lives and wants, in the minds of the partially educated young, as this reading. The style to which I refer will be better understood by describing a few of its leading features.

In it, hero and heroine hunt in couples as usual. His figure is always "Apollo like," with "jetty hair and moustache," and "flashing eye," or else with "auburn" hair, pale face, and "melancholy orbs." One or the other of these is indispensable. The lady must have "coral" lips and cheeks, "pearly" teeth, and her hair, whether "golden," or "raven," must curl, or at least "ripple." Then, her eyes, whichever of the standard colors they happen to be, must always be "liquid."

Now mark what happens latterly in the history of this superfine pair. We shall invariably find him "clasping her to his breast," or else she "bursts into tears and hides her head on his shoulder." In either case they exchange "burning kisses," etc.

What sort of teaching is this for plain Susan who must marry farmer John or Charley, or not at all. Will a careful study of the above make her better satisfied with his square face and shoulders, and not over brilliant eyes? Or should he be a reader of such literature also, will he be apt to think that Susan, whose teeth and complexion resemble neither coral nor pearls, is the one woman in the world for him? And if they marry finally, will they be so apt to feel that perfect pleasure in each other they might have done, had they never read of such very different beings? A horrible tale, full of blood and tempests, and "long glittering blades," would not, from its very impossibility, do a tithe of the mischief of this tame stuff—just such romances as any girl may get up with the "fascinating stranger" who airs his moustache in the vicinity. And here lies the very secret of the 'infatuation,' so called, of many a girl. Her mind had long ago been so imbued with the spirit of these miserable fictions, that it was instinctively on the watch for the same "romantic event," which wiser people call "folly," or "madness."

Many a parent shrinks in horror from the idea of their children reading stories of "dashing pirates," and "bold highwaymen," while on their tables lie printed sheets which hold a subtler mischief than could possibly be conveyed by the careful study of acts, in which, from their very nature, the young folks feel no temptation to engage.

LOUISE.

The Sin that Killed the Baby.

A correspondent writes to the *American Agriculturist* to the following effect. "I recently attended the funeral of a child of three or four summers. The minister during his remarks dwelt upon the fact, that death is the result of sin, which I agreed with; but I thought, while looking upon the lifeless little form, that the sin which killed this little one, was sin against natural as well as spiritual laws. She was clad for the grave in the garments she had worn while living, and the bare neck and arms, exposed while the child was in health, to gratify

the vanity of the parents, had invited the disease which proved fatal. That was the sin which killed the baby, and which is making fearful work with hundreds of others, whose parents prefer fashion to health, and the exhibition of their children's beauty, to the safety of their lives."

This language is none too strong. It is positively wicked to subject tender children to such treatment, which would be fatal to adults of vigorous constitution. In our changeable climate, especially, too great precaution can scarcely be taken to guard the throat and lungs from disease. They need not be kept muffled with warm clothing, but should always have sufficient protection to guard against the sudden changes, for which this country is noted. Keep the children's chests and arms covered, if you would have them healthy.—[Ed. Agr.]

How much Sleep is Needed?

To the Editor of the American Agriculturist.

In the February No. of the *Agriculturist* you say that, from the age of 12 years to the full growth of the body, 9 hours of sleep are absolutely necessary, and that after that 8 will answer, though 9 are better. How will you account for the case of Humboldt, who was a laborious student all his life, and must have incurred many hardships during his extensive travels? He lived to within a few months of 90 years; and yet, from youth up, slept only about 4 hours in the 24. Please answer in the *Agriculturist*.

LANCASTER CO., PA.

J. M. SEITZ.

REPLY.—This question may be readily met with another, viz.: How is it to be accounted for that all men are not Humboldts? There are exceptions to all general rules, particularly those relating to bodily habits. "What is one man's meat is another's poison," expresses this truth. With persons of ordinary constitution, the amount of sleep prescribed in our article is none too much, and the rule was published for their benefit. If our correspondent or others find upon trial that it is too much in their case, let them vary it to meet their own requirements.

Directions for Cookery, etc.

Mutton Hams.

A correspondent of the London Field gives the following directions for pickling mutton hams. Procure a plump leg of mutton, wipe it dry, and put it in a pickle, made of 3 gallons soft water, 1 lb. coarse sugar, 2 oz. saltpeter, 3 lbs. common salt. Boil the above ingredients together, remove the scum as it rises, and immerse the meat when cold. In two or three months' time the ham will be excellent for baking or boiling; a slice cut out and broiled, is very good. It may be smoked, but is by many preferred without that process.

Corned Beef Hash.

This and the following recipe are from the Housekeepers' Encyclopædia, by Mrs. Haskell a subscriber, and contributor to the *Agriculturist*:

The best hash is made from boiled corned beef. It should be boiled very tender, and chopped fine when entirely cold. The potatoes for hash made of corned beef, are the better for being boiled in the pot liquor. When taken from the pot, remove the skins from the potatoes, and when entirely cold, chop them fine. To a coffee-cup of chopped meat, allow four of chopped potatoes, stir the potatoes gradually into the meat, until the whole is mixed. Do this at evening, and if warm, put the hash in a

cool place. In the morning put the spider on the fire with a lump of butter as large as the bowl of a table-spoon, add a dust of pepper, and if not sufficiently salt, add a little; usually none is needed. When the butter has melted, put the hash in the spider, add four table-spoons of water, and stir the whole together. After it has become really hot, stir it from the bottom, cover a plate over it, and set the spider where it will merely stew. This is a moist hash, and preferred by some to dry or browned hash.

Browned Hash of Corned Beef.

Heat the hash in a kettle, and mix through it two tablespoonfuls of sweet butter, add seasoning to suit, add a spoonful of water only. Have two tablespoonfuls of melted butter boiling hot in the spider, turn it up and round, that the butter may touch the whole surface of the spider. Put in the hash, press it tightly, and keep it cooking gently without burning. Run a knife under it now and then, to see that it is not scorching. When browned, place a platter over the spider, and turn it out without breaking. It will need two persons to dish it; one to hold the platter firmly on the spider, and the other to turn it out.

Cherry Pudding.

Contributed to the *American Agriculturist* by Mary R. Burwell, Crawford Co., Pa. Take 3 teacupfuls of buttermilk, 8 eggs, 8 teacupfuls of pitted cherries, a small teaspoonful of soda, and a pinch of salt. Stir the mixture well, and thicken with wheat flour, until a stiff batter is formed: then put it in a muslin or linen bag, and boil it 2½ hours. The water should be boiling, when the pudding is introduced. Serve up hot, with sauce to the taste. Sweet cream and sugar make a very palatable accompaniment.

Corn Bread.

Contributed to the *American Agriculturist* by "Mary," Chillicothe, O. Dissolve 1 tablespoonful of butter in 3½ pints of boiling milk; in this scald 1 quart of Indian meal. When cool, add ½ pint of wheat flour, ½ cup of sugar, 1 teaspoonful of salt, 2 eggs, well beaten. Bake in two cake tins, well greased.

Dough Cake.

Contributed to the *American Agriculturist* by Susan Jane, Burlington, Ind. Mix 4 cups of bread dough, 3 of sugar, 2 of butter, 1 gill of wine(?), 3 eggs, 1 teaspoonful of soda dissolved in sour milk, and nutmeg or other spice. Pour the batter into a buttered pan; let it rise; then bake two hours.

Dutch Pancake.

One egg; 1 large spoonful sugar; 1 cup of milk; 2 tablespoonfuls melted butter; 1 teaspoonful cream of tartar; ½ teaspoonful of soda; a little salt; add flour to make them as thick as pancakes. Bake ½ hour; slice and use when warm with butter. For half a dozen persons, take double the above quantities.

Measure Loaf Cake.

Three cups of milk; 2 cups sugar; 1 cup yeast. Make a stiff batter and let it rise: then add 2 cups of butter; 2 cups of sugar; 2 eggs; ½ cup of yeast, mace and nutmeg. When light, stir in the fruit and bake.

Lard Candles.

Contributed by David Shaver, Perry Co., Pa. Take 12 lbs. of lard, 1 lb. alum, 1 lb. saltpeter; dissolve them together, put into a vessel with 1 gill of boiling water on. Pour it into a pot, and stir it over a slow fire, until done frothing; then operate as on tallow candles. It makes pretty good candles.



The Editor with his Young Readers.

About the Picture.

Every body in this country is talking and thinking about war. The boys are as full of it as their fathers, and are ready to shoulder their wooden guns and wave their flags, and show what they would do if they were only men. War is a terrible evil, but in the present condition of the world it seems sometimes to be necessary. When bad men unite their forces to do wrong, it is the duty of good men to unite and sustain the right. But we do not intend here to write about the troubles in this country; there is enough printed in the daily and weekly newspapers to fully inform you of the important events of the time. Read them carefully, for we are now *making history*. We want to call attention to just one point in the pleasing picture above, which represents a little company of school boys playing soldier, and engaged in drilling. Notice the boy who carries the flag. He is better dressed than the others, and has the post of honor in the line. But see how much trouble he makes the captain. His toes are two inches over the line. He is a good-natured looking boy, but he has a careless appearance, as though he felt, "what's the use of being so strict; suppose I am not on the line, what difference will it make?" Now look at the boy with the cap on. He stands up straight as a soldier, with his toes to the mark, and his eyes on his captain, ready for orders. Why do you admire him more than the first? "Because he *tries* to do his best," is the ready answer. That determination will make a man of him. For if he is so careful while at play, he will be the same when at work—that is his habit, and that habit will grow into his character. He is the boy the farmer will want for head workman, the merchant will choose him for confidential clerk, people will seek him for their representative in the legislature. Wherever he goes he will win respect and confidence, and he will be almost certain of prosperity.

But the first boy, though he may have been mother's pet at home, and a clever fellow among his playmates, is likely to grow up a careless, shiftless man, always behind time, always in debt and trouble, of use to nobody, and when he dies few will miss him. Which of these boys will you take for your

pattern? Which are you now nearest like? There is time for most of you to correct habits of carelessness; begin at once and "toe the mark," whether at work or play.

A Noble Boy.

Not long since a neatly dressed little boy not more than ten years old was standing on the sidewalk of a crowded street, watching the people as they passed. Presently a little girl, several years younger than himself, in attempting to cross the muddy street, fell, and soiled her dress and hurt herself considerably. In a moment the little fellow ran to her, helped her up, spoke to her in the kindest tones, inquired where she lived, and led her away towards her home. She was not a pretty child, neither was she handsomely dressed; on the contrary she looked very poor, but the noble little fellow did not stop to think of that. He saw that she needed assistance, and that was enough. His heart was full of kindness, which only waited for an opportunity to show itself. One could easily tell that boy's fortune. He has a good mother, and he listens to her instructions. He will grow up beloved and happy. He will never be poor, for he already possesses the choicest treasure, a kind heart. Try and be like him.

About Names—Days of the Week.

It is an interesting fact that nearly all proper names signify something. The name of the first man, Adam, means red earth; Eve signifies mother; and it was the custom for a long time to give names descriptive of the person or thing designated. Now-a-days, proper names are so plenty, that a new one is seldom invented, and thus we have thousands of Johns, Williams, Marys, Susans, etc. The English names of the days of the week, were given by our Saxon ancestors, who, as you have read, settled in England many hundred years ago. They were idolaters, and they named the days in honor of their principal deities.

Sun-day, as you readily perceive, means, the day of the sun. On that day they worshipped an idol representing that luminary, which is described as being like the bust of a man, set upon a pillar, with outstretched arms holding a burning wheel before his breast. *Monday* means *Moon-day*. The moon was worshipped under the form of a woman with long ears, dressed in a short coat and a hood. She

held in her hand a representation of the moon. *Tuesday* was named from *Tuisco*, the Saxon god of war. He is represented as a warrior clad in armor, with a huge sword uplifted. *Wednesday* comes from *Wodin* or *Odin*, the supreme divinity of the Northern European nations. He was represented as a venerable old sage, clothed in the skin of an animal, holding a scepter in his right hand. *Thursday* was dedicated to *Thor*, reputed to be the oldest and bravest son of *Wodin*. He was shown seated on a throne, with a crown of gold on his head, adorned with a circle in front, in which were set twelve golden stars; he held a scepter in his right hand. *Friga*, or *Frea*, was the wife of *Wodin*, and *Friday* was derived from her name. She was represented with a drawn sword in her right hand and a bow in her left. *Saturday* commemorated *Sæter*, another name for *Saturn*. He was set up on a perch like a bird. He had lean sharp features, and was bare-headed. In his left hand was a wheel, and in his right a pail containing flowers and fruit. His dress consisted of

a long coat girded with linen. These representations were all, of course, fanciful and absurd, but they go to prove that men in the most ignorant condition feel that there is a superior being to whom worship should be given. Their superstition was indeed pitiable, but was not their blind devotion preferable to the thoughtlessness and neglect of too many who have been taught the existence of the true Deity? If we have more light than they, surely we should profit by it.

Type Setting—Amusing Mistakes.

Have you ever been in a printing office? There are many curious things to be seen there. Perhaps we may describe some of them more particularly hereafter. You would be much interested to watch the *compositors*. They are the men who arrange the types. Each letter, and each punctuation mark is cast on a separate piece of metal, about an inch long, and these are distributed in small boxes arranged in a frame called a *case*. One box is for the A's, another for B's, another for *commas*, and so on. The compositor holds in his left hand a small iron apparatus looking something like an open box with one side out, in which he sets the types, one by one, placing them in proper order to print the words of the written "copy" before him. It requires long practice for a man to set types quickly, and without making mistakes. Sometimes the changing of a single letter will alter the meaning of a whole sentence. Such errors are usually corrected before the paper is printed, but occasionally an amusing blunder is left. For instance, in printing the Bible once, the compositor in setting up the passage "All that a man hath will he give for his life," made it read "All that a man hath will he give for his wife." The "proof-reader," whose work it is to look for and point out mistakes, found the error, and marked it, but the compositor overlooked it again. The proof-reader seeing the mistake a second time, wrote with his pencil on the margin of the paper, opposite the sentence, "That depends upon circumstances," after which the right letter was inserted. Not long since, a Hartford newspaper, noticing the death of an editor, said "He was a high-minded gentleman;" of course it should have read *high-minded*. Another paper says, "the people of India live chiefly on *mice*," instead of rice. Shortly after an election, a newspaper of the defeated party

THE STAR-SPANGLED BANNER.

NEWLY ARRANGED AND BROUGHT WITHIN AN EASY COMPASS FOR CHOIR AND CHORUS-SINGING BY WM. B. BRADBURY.

SOLO, or Semi-Chorus in Unison.

MELODY.—SEMI-CHORUS by Male or Female voices, or Both.

ALTO.

TENOR.

BASS.

PIANO-FORTE OF MELODEON.

1. O say, can you see, by the dawn's early light, What so proudly we hail'd at the twilight's last gleaming,
Whose broad stripes and bright stars thro' the perilous fight, O'er the ramparts we watch'd were so gallantly streaming? } And the rocket's red glare, bombs bursting in air, Gave
2. On the shore dimly seen thro' the mists of the deep, Where the foe's haughty host in dread silence re-po-ses, } Now it catches the gleam of the morning's first beam, In full
What is that which the breeze, o'er the towering steep, As it fit-ful ly blows, half con-ceals, half dis-clo-ses?

FULL CHORUS of Choir and Congregation.

proof thro' the night that our flag was still there. O say, does that star-spangled ban-ner yet wave O'er the land of the free, and the home of the brave?

glo-ry re-flect-ed, now shines on the stream! 'Tis the star-spangled banner, O long may it wave O'er the land of the free, and the home of the brave.

3 And where is that band who so vauntingly swore,
'Mid the havoc of war, and the battle's confusion.
A home and a country they'd leave us no more?
Their blood has washed out their foul footsteps' pollution.
'No refuge could save the hireling and slave,
From the terror of flight or the gloom of the grave.
CHORUS.—And the star-spangled banner in triumph shall wave, &c.

4 O, thus be it ever, when freemen shall stand
Between their loved homes and war's desolation!
Blessed with victory and peace, may the Heaven-rescued land,
Praise the Power that hath made and preserved us a nation.
Then conquer we must, when our cause it is just,
And this be our motto: "In God is our trust!"
CHORUS.—And the star-spangled banner in triumph shall wave, &c.

intended to say, we are *linked* like a band of brothers," but the types were wrong, and said "we are *licked*, etc." A Missouri paper informed its readers that the wife crop of Gasconade County, was 25,000 gals.; but before bachelors could profit by such a fine opportunity, the mistake was corrected by putting *wine* in place of wife.

The Cunning Will.

A wealthy old lady had a nephew and niece, and a more distant relative, a young lady; these were the only persons to whom her property would descend by law, when she should die. The first two always made a great show of affection when they visited her, which was but seldom, although she wished that one of them might live with and care for her in her old age. But neither would consent to this, and she therefore employed the young lady as a servant. The old lady was very pious, and spent much time with her Bible; and her young companion, who was also a sincere Christian, loved nothing better than to read to her from its consoling pages. She was faithful in her duties, not merely because paid for it, but she was sincerely attached to her mistress, and delighted to promote her comfort.

In time, the old lady died, and after the funeral, according to custom, a lawyer came to open and read the will in presence of the surviving relatives. It ordered all her possessions to be divided into three parts. The first portion was to consist of the house and lands surrounding it; the second, of the furniture, plate and jewelry, of which there was a large quantity, and the third was only the old Bible which had afforded her so much happiness in life. It was further directed that the nephew should have the first choice of his portion, then the niece, and the young lady should have the remaining part. The nephew instantly chose the house and farm, which were valuable, saying in a sneering tone, "The old lady was not to be fooled by pretended devotion, she well knew who were her friends;"

meaning by this to cast reflections upon the faithful servant. The niece was equally unkind, for she said: "Since Janet loved the old Bible so well, of course she would prefer I should leave it for her, and I will therefore take the furniture and plate." Janet's only reply on receiving the Bible was: "I am content: this book is to me a treasure, and I find in it more than wealth can give."

When all was over, and Janet retired to her room, she turned at once to her Bible, to find some passage that might soothe her wounded feelings. What was her astonishment to find, laid between its leaves, bank notes amounting to more than a hundred thousand dollars, which had been placed there on the day of the old lady's death, and which made up the bulk of her fortune! So you see how in this instance, greediness outwitted itself, and true devotion was abundantly rewarded. Don't forget though, that Janet would have been happier with her book alone, and a contented heart, than the others could possibly be while they cherished the evil feelings of avarice and jealousy.

New Problems.

No. 11.—*Enigma*.—Several mistakes crept into this problem as published last month, which made nonsense of part of the answers. A few persevering girls and boys deciphered it, nevertheless. We give it correct now, that all may have a fair chance:

I am a Scripture proper name of 17 letters, representing the darkest shade of iniquity:

My 1, 14, 8, 16, 4, 13, is not yet, but will be universally known.

My 4, 11, 3, 10, 5, 12, 7, was an ancient city.

My 7, 12, 13, 5, 15, 7, was a person noted for great moral courage.

My 17, 15, 7, the most important animal on a farm.

My 12, 9, 17, is essential to successful warfare.

My 10, 2, 6, 17, represents the Humbug "prizes" of the present day.

No. 12.—*Arithmetical Question*.—A man had \$100 to purchase cows, sheep, and geese; he was to pay \$10 each for cows, \$1 each for sheep, and 12½ cents each for geese. He must have 100 head in all, (cows, sheep, and geese,) and only expend \$100; how many must he have of each?

No. 13.—*Word Puzzle*.—Contributed by "Marco." How do you read it?

Friends,	sir,	Friends,
stand	your	disposition.
I	bearing	
A man		the world
is		
contempt		while the
	ridicule,	
	are	
	ambitious	

No. 14.—*Charade*.—I am divided into two parts. My first is half; my last is whole; my whole is half my second.

Answers to Problems.

Illustrated Rebus in April No. (p. 122.) Our young friends have answered all around this puzzle, without exactly hitting the true reading. Here is the solution: C low shoe r heart against awl vice, butt open the door to wall t root h; or, Close your heart against all vice, but open the door to all truth.

No. 8.—*Illustrated Rebus* in May No. (p. 153.)—*Answer*: Two bear in jury eye snow sign of a cow ard; or, To bear injury is no sign of a coward.

No. 9.—*Arithmetical Question*.—The shoemaker lost seven dollars and the boots.

No. 10.—*Anagrams*, from Aunt Sue's "Puzzler."

I get dinners.	Ingredients.
Ten coons in tar.	Consternation.
Tom's nine hats.	Astonishment.
I attend in pomps.	Disappointment.
Find lies.	Infidels.
Sin is content.	Inconsistent.

The following sent in correct answers up to the date of May 15:

Frank L. Strong, 8; Joseph B. Lewis, 8; Christopher Seymour, 9; John B. Newell, 9; A. D. Neff, Jr., 9; Sarah Nicholl, 8; M. B. Eshleman, 8; Wm. A. Hoyt, 9, (always send an answer with a problem offered for publication); Deila S. Mitchell, 10; Frank Fancher, 11, (you deserve much credit for solving so difficult an enigma); Lyman Eddy Rockwell, 9; C. L. Siewers and A. C. Siewers, 8, 9, (keep on thinking); Snowden B. Gookings, 3, (name overlooked); Rufus W. Weekes, 9, 10, 11, (8 almost); F. A. Sanders, 9; B. Sullivan, 9; James S. Cooley, 11; Caroline, 10; Robert M. Hasbrouck, Jr., 9.

Explanation of Latin Phrases in Common Use.

There are many very expressive phrases in foreign languages which are often used by English writers. As a rule we would discourage their introduction into common writing, though they are pleasing to one able to appreciate their full force. But as they will doubtless continue long in use, we have thought it worth while to throw several of them together here, and give the explanation, that our readers may have them at hand for reference. The following are all from the Latin, which was the ancient Roman Language.

Ab initio. From the beginning.

Ab uno disce omnes. From a single instance you may infer the whole.

Ad captandum vulgus. To catch the rabble.

Ad infinitum. To infinity.

A fortiori. With stronger reason.

Alias. Otherwise; as, Allan alias Thompson.

Alibi. Elsewhere.

Alma mater. A benign mother; applied generally to the university.

A mensa et thoro. Divorced from bed and board.

Anno Mundi (A.M.). In the year of the world.

A priori. From the cause to the effect.

Argumentum ad hominem. An argument to the man.

Audi alteram partem. Hear the other party.

Aut Caesar aut nullus. He will either be Caesar or nobody.

Bona fide. In good faith; in reality.

Causa belli. The cause or reason for war.

Caput mortuum. The worthless remains.

Cedant arma togæ. Let arms yield to eloquence.

Compos mentis. In a state of sound mind.

Cui bono? To what good.

Data. Things given or granted.

De facto—de jure. From the fact—from the law.

Delenda est Carthago. Carthage must be destroyed.

De mortuis nil nisi bonum. Let nothing be said of the dead but what is favorable.

Deo volente. With God's will.

Desideratum. The thing desired.

Dulce et decorum, est pro patria mori. It is sweet and glorious to die for one's country.

Dum vivimus vivamus. Let us live, while we live.

Esto perpetua. Be thou perpetual.

Ex cathedra. From the chair; authoritatively.

Ex nihilo nihil fit. Nothing produces nothing.

Ex officio. By virtue of office.

Ex parte. On one part.

Extempore. Without premeditation.

Fac simile. Do the like—an exact resemblance.

Fama semper vires. A good name will shine for ever.

Fas est et ab hoste doceri. It is allowable to derive instruction even from an enemy.

Felo de se. A suicide.

Fiat justitia, ruat cælum. Let justice be done, though the heavens should fall.

Fruges consumere nati. Men born only to consume food.

Hinc illæ lachrymæ. Hence proceed these tears.

Id est (i. e.). That is.

Id genus omne. All persons of that description.

Impromptu. Without study.

In propria persona. In person.

In re. In matter of.

In terrorem. In terror.

In transitu. In passing.

Jure divino. By divine right.

Labor omnia vincit. Labor conquers every thing.

Lapsus linguae. A slip of the tongue.

Lex talionis. The Law of retaliation.

Locum tenens. A deputy or substitute.

Magna est veritas, et prevalebit. The truth is powerful and will ultimately prevail.

Memento mori. Remember death.

Mirabile dictu. Wonderful to tell.

Multum in parvo. Much in little.

Mutatis mutandis. After making the necessary changes.

Necessitas non habet leges. Necessity has no law.

Nem. con. An abbreviation of *nemine contradicente*.

That is, without dissent or opposition.

Ne plus ultra. Nothing beyond—the utmost point.

Nota Bene (N. B.). Mark well.

Obiter dictum. A thing said by the way, or in passing.

O tempora! O mores! Oh the times, oh the manners.

Otium cum dignitate. Ease with dignity.

Pari passu. By a similar gradation.

Par nobile fratrum. A noble pair of brothers.

Particeps criminis. An accomplice.

Passim. Every where.

Per fas et nefas. Through right and wrong.

Per se. By itself.

Porta nascitur non fit. Nature, not study, must form a poet.

Prima facie. On the first view, or appearance.

Prima via. The first passages; the upper part of the intestinal canal.

Primum mobile. The main spring; the first impulse.

Principiis obsta. Oppose the first appearance of evil.

Pro aris et focis. For our altars and firesides.

Pro bono publico. For the public good.

Pro et con. For and against.

Pro tempore. For the time.

Quid nunc? What now?—applied to a news-hunter.

Quid pro quo. What for what; tit for tat.

Quot erat demonstrandum. Which was meant to be shown.

Requiescat in pace. May he rest in peace.

Respice finem. Look to the end.

Seriatim. In order.

Sic itur ad astra. Such is the way to immortality.

Sic passim. So everywhere.

Sic transit gloria mundi. Thus the glory of the world passes away.

Sine die. To an indefinite time.

Sine qua non. An indispensable condition.

Status quo ante bellum. The state in which both parties were before the war.

Sub silentio. In silence.

Summum bonum. The chief good.

Suum cuique. Let every man have his own.

Tempora mutantur, et nos mutamur in illis. The times change, and we change with them.

Toties quoties. As often as.

Vade mecum. Go with me: a constant companion. (Usually applied to a pocket book.)

Vis inertia. Force or property of inanimate matter.

Versus or vs. Against.

Vice versa. The terms or cases being changed.

Vi et armis. By main force.

Viz. (videlicet.) Namely.

Vox et præterea nihil. A voice and nothing more.

Vox populi vox Dei. The voice of the people is the voice of God.

STANDING PREMIUMS For 1861. Vol. XX.

In selecting articles for premiums, we have aimed to get such as are useful and as have been most frequently called for by our readers. We wish it distinctly understood that these premiums are offered in good faith—no cheap, trashy, imperfect, poorly made or second-hand thing, will be sent out, but each article offered, is the best of its kind, and every one will be selected by the publisher from the very best manufactured. They will be the best sold in the market at the prices named.

We offer nothing for competition. Each premium is for a specified number of subscribers, and no one's remuneration will depend upon what other unknown persons are doing. Every one aiming for a premium, knows just what he or she, is working for; and also that if a higher premium is not secured, a lower one can be taken.

The premiums are offered for subscribers for Volume XX (1861), whenever received. Canvassers will have time for completing their lists, but the premium will be paid as soon as any list is made up—if duplicate lists are sent, to refer to at once. Clubs need not be confined to one P. O.

Premium A.

130 Subscribers at 80 cents each, (or 90 at \$1 each,) will entitle the person getting up the club to one of Wheeler & Wilson's best \$45 Sewing Machines, (including Hemmers) new from the factory, and of the very best make. There is no better family machine than this made, as we have proved by three years' use in our own family. We want no better.—The machines will be selected new at the manufactory, be well boxed, and forwarded without expense to the recipient, except for freight charges after leaving the city. Full instructions for setting up and using, go with each machine.

Premium B.

130 Subscribers at 80 cents each, (or 90 at \$1 each,) will entitle the person getting up the club to a set of Appleton's New American Cyclopaedia, now in course of publication, consisting of fifteen large volumes of 770 pages each. This is a magnificent work, forming a whole library embracing every topic of human knowledge. Eleven volumes are now ready, and the remaining four will be furnished as fast as issued. Price, \$45.

Premium C.

98 Subscribers at 80 cents each, (or 69 at \$1 each,) will entitle the person getting up the club to one of Willcox & Gibbs' \$35 Sewing Machines, including a set of Hemmers. This is the best machine of its kind, (sewing with one thread), and has several points superior to others. It is neat, well made, simple in its operation; and having tested one for some time past in our own family, we can recommend it to those who can not afford to buy the higher priced double-thread machines. (The regular price of this machine is \$30, but we have included in our offer \$5 extra for the set of Hemmers, because those used with this machine are very simple and effective, and should go with every one sent out.) The machines given as premiums, will be selected new at the factory, be well boxed, and will be forwarded to the recipient free of expense, except for freight after leaving the city. They will go out set up ready for use, with printed directions for operating.

Premium D.

65 Subscribers at 80 cents each, (or 33 at \$1 each,) will entitle the person getting up the club to one of the New \$10 Wringing Machines, described on page 247 of the August *Agriculturist*. This is one of the best labor-saving inventions of the day, and we unhesitatingly say that it will pay to have one to assist in the washing of every family, even if of only moderate size. We would not take \$50 for our machine, if another could not be purchased.

Premium E.

45 Subscribers at 80 cents each, (or 20 at \$1 each,) will entitle the person getting up the club to one of Kendall's Aneroid Barometers, described on page 232 of the August *Agriculturist*. This is a good portable instrument, and valuable to every person as a weather guide, as well as for scientific purposes. (New price \$7.50.)

Premium F.

50 Subscribers at 80 cents each, (or 26 at \$1 each,) will entitle the person getting up the club to one of the best \$8 Straw and Hay Cutters. [If preferred, the best \$8 Subsoil Plow (two-horse) will be given.]

Premium H.

40 Subscribers at 80 cents each, (or 21 at \$1 each,) will entitle the person getting up the club to one of the best \$6½ Hand Corn Shellers—a convenient, effective, and useful implement.

Premium I.

30 Subscribers at 80 cents each, (or 16 at \$1 each,) will entitle the person getting up the club to one extra copy of Vol. XX, and also to the 4 previous unbound Volumes of the *American Agriculturist*, (16, 17, 18, 19,) sent post-paid.

Premium K.

25 Subscribers at 80 cents each, will entitle the person getting up the club to an extra copy of Vol. XX, and also to any three of the unbound volumes 16, 17, 18, and 19 sent post paid. 20 Subscribers at 80 cents each to an extra copy of Vol. XX, and two of those volumes. 15 Subscribers at 80 cents each, to an extra copy of Vol. XX, and one of the previous volumes.

Premium L.

20 Subscribers at 80 cents each, will entitle the person getting up the club to an assortment of Winsor & Newton's Water Color Paints—consisting of 12 colors, put up in a neat mahogany case, with brushes, etc. These Paints are imported from London, and are by all considered the best in the world. They are adapted to the finest work, or they will make a neat and appropriate present to any of our younger readers. They will be sent post-paid any where within 3000 miles. (If to go to the British Provinces or to the Pacific Coast, the recipient will need to send 84 cents for extra postage above the 6 cents per ounce which we pay.)

Premium M.

15 Subscribers at 80 cents each, will entitle the person getting up the club to an Assortment of Osborne & Hodgkinson's Water Color Paints, consisting of 24 colors or shades, put up in a mahogany case with brushes, cups, etc. These are of American manufacture, and though not so fine as the above, they will answer for ordinary practice by children or beginners, and for common sketching. They will also be sent by mail, post-paid. (If to go to the British Provinces, or to the Pacific Coast, \$1.05 will need to be sent by the recipient to pay the extra postage above 6 cents per ounce.)

Premium N.

10 Subscribers at 80 cents each, will entitle the person getting up the club to any one of the four previous unbound volumes (16, 17, 18, or 19,) sent post-paid.

Premium O.

237 Subscribers at 80 cents each, (or 125 at \$1 each,) will entitle the person getting up the club to one of Geo. A. Prince & Co.'s \$75 Melodeons (5 octaves). These Melodeons are of very superior tone and finish. We have ourselves used one (costing \$150) for two years past, and it has given the highest satisfaction, and is pronounced by all who have heard it, as one of the very best. The different priced instruments are of equally good tone—the price varying with the size and style of finish. The size, prices, etc., of these instruments can be learned particularly by sending a stamp to Geo. A. Prince & Co., Buffalo, N. Y., for an illustrated descriptive catalogue. The instruments given as Premiums, will be sent new directly from the factory at Buffalo, ready boxed, and without extra expense to the recipient, except for freight after leaving the factory.

The above premium list may be made up by the members of a congregation, or Sabbath School, and an instrument thus secured for a church or school-room.

Premium P.

182 Subscribers at 80 cents each, (or 105 at \$1 each,) will entitle the person getting up the club to one of Geo. A. Prince & Co.'s \$60 Melodeons (4½ octaves). See remarks above.

Premium Q.

130 Subscribers at 80 cents each, (or 90 at \$1 each,) will entitle the person getting up the club to one of Geo. A. Prince & Co.'s \$45 Melodeons (4 octaves). See remarks above. N. B.—Higher priced Melodeons will be given for larger lists, in the same proportion.

Book Premiums.

Valuable Book Premiums.—Instead of the above premiums, any person getting up a club of 20 or more names may choose any desired Books from the list (advertised on page 330 of Nov. No.) to the amount of 12½ cents for each name forwarded at 80 cents, (or 32½ cents for each name sent at \$1,) and the books will be sent post-paid. (If to go over 3000 miles, the recipient will need to send 20 cents for extra postage on each dollar's worth of books.) Persons making up a club for any of the above premiums, and getting some names over the required amount, will be entitled to books for the surplus names.

Market Review, Weather Notes, etc.

AMERICAN AGRICULTURIST OFFICE,
New-York, Monday Morning, May 20, 1861.

The general opening of river and canal navigation, since our last report, has largely increased the receipts of breadstuffs at the head of tide-water at Albany. The receipts at that point, for the first and second week in May, were 659,128 bushels of wheat, against only 177,378 for the same time last year—an increase of 481,750 bushels. The receipts of flour however were 11,437 bbls. this year against 38,753 bbls. last year—a decrease of 26,316 bbls. equivalent to 131,580 bushels of wheat, but still leaving an excess of 350,000 bushels this year. Though the canals opened five days later last year, and half a month later than in 1859, yet the receipts by water, and by the Erie and Central railroads, have far exceeded those of any previous season for many years past. Of Barley the receipts show a falling off from last month of 35,000 bushels, but the season for the sale of barley is drawing to a close. But notwithstanding the increased receipts of Breadstuffs, the sales have been less than during the previous month. The difficulty of selling foreign exchange, that is bills drawn against produce shipped abroad, which was noted at the close of our last report, has continued to operate against transactions here. The rate of exchange has been so low, as to continue the bringing over of specie, and foreign gold is constantly arriving. This is not an unhealthy indication in one respect. Our exports of produce are usually paid for by foreign goods imported. Now we are importing and using less, and by so much adding to our wealth by economizing in consumption. Lack of ship room, and consequent high freights, also hindered the exports of our produce. Recently, the blockade of southern ports has stopped the employment of vessels in the Southern trade, increasing the number here available for foreign trade, and causing a decline in freight. This has, within the past few days, decidedly enlivened the transaction in corn and wheat for export. But the demands have been promptly met by the incoming receipts, and there is still a decline in prices, especially for common and medium qualities of flour and grain. An unusually large lot of unsound wheat and corn is coming forward, which is being sold very low and at irregular prices; it is so poor and rotten, that none but distillers buy it—and generally on their own terms. Some of the better lots of grain, when not too damp, or otherwise injured, are taken for export in steam vessels with a view of getting them into foreign markets, before they become "heated". As shown by the tables below, the total shipments of Breadstuffs from this port, since January 1, have been far ahead of the same period last year, and, indeed, unprecedentedly large, at least as far as regards Flour, Wheat, and Corn. The value of the increase in the exports of these three articles, as compared with Jan. 1, to May 15, last year, can be safely estimated, at ten millions of dollars, which is a vast addition to the volume of our export trade, for a period of only four and a half months—equivalent to a gain of nearly two and a half millions of dollars every month of the current year. The transactions in Cotton have been light, owing to the high prices claimed by holders, in view of the blockade of the ports in the states, south of Maryland, and the consequent diminution of supplies here. The Rice market has been very active and a large advance has been established. Stocks in first hands are now reduced to a very small amount, and coastwise supplies can not be looked for at present. The Provision trade has not been active; the demand has been mainly for home use, and to fill government orders; and prices of pork and lard have declined. As the demand for Hay from the South has ceased, and shipments thither cannot be made during the blockade, supplies in this market are increased, and prices have fallen. The local consumption is the main reliance of sellers. The movements in other branches of business have been unusually limited. Considerable changes in the price of some market commodities, as Potatoes, eggs, poultry etc., will be noticed in the table of current prices, below. Early vegetables, are high and scarce, owing to the cutting off of the usual large supplies from Southern Ports.

TRANSACTIONS AT THE NEW-YORK MARKETS.

RECEIPTS.	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats.
25 days this month	334,000	1,122,000	755,000	19,850	65,000	317,000
25 days last month	236,500	831,500	385,000	6,500	128,000	146,000

SALES.	Flour.	Wheat.	Corn.	Rye.	Barley.	Oats.
25 days this month	424,000	2,389,000	1,553,000	73,450	84,750	48,750
26 days last month	467,000	2,479,000	1,660,000	39,000	96,000	56,000

Exports from New-York, January 1, to May 15.

	1860.	1861.
Wheat Flour, bbls.	281,511	843,585
Rye Flour, bbls.	3,858	4,665
Corn Meal, bbls.	32,386	32,386
Wheat, bushels.	424,100	4,415,825
Corn, bushels.	299,701	3,651,033
Rye, bushels.	100	46,081
Barley, bushels.	200	1,000
Oats, bushels.	765	43,024

Receipts of Breadstuffs at Chicago, Jan. 1. to May 7.

	1859.	1860.	1861.
Flour, bbls.	117,623	150,559	378,940
Wheat, bushels.	685,872	1,100,916	2,143,459
Corn, bushels.	938,762	3,888,749	3,664,849
Oats, bushels.	166,328	419,140	101,063
Rye, bushels.	16,114	149,310	101,063
Barley, bushels.	92,377	100,371	276,512

The receipts at the head of tide-water, Hudson River, of the principle articles of Produce, from the opening of the Canals to, and including the 15th of May, have been as follows:

	1859.	1860.	1861.
Canal open.	April 15.	April 25.	May 1.
Flour, bbls.	40,469	43,893	31,400
Wheat, bushels.	82,918	199,173	726,361
Corn, bushels.	197,566	402,498	333,828
Barley, bushels.	77,500	41,052	38,047
Oats, bushels.	469,400	380,053	334,057
Rye, bushel.	29,479	16760	1,251

CURRENT WHOLESALE PRICES.

	April 19.	May 20.
Flour—Super to Extra State	\$5 05 @ 5 40	\$5 00 @ 5 35
Superfine Western.	5 05 @ 5 15	4 95 @ 5 10
Extra Western.	5 20 @ 5 25	5 15 @ 5 20
Fancy to Extra Genesee.	5 45 @ 5 75	5 40 @ 5 50
Super, Extra Southern.	5 20 @ 5 25	5 15 @ 5 20
RYE FLOUR—Fine and Super.	3 30 @ 4 10	3 00 @ 4 00
CORN MEAL.	2 80 @ 3 15	2 85 @ 3 25
WHEAT—Canada White.	1 45 @ 1 00	1 38 @ 1 57 1/2
Western White.	1 42 1/2 @ 1 65	1 35 @ 1 75
Southern White.	1 47 1/2 @ 1 68	1 45 @ 1 78
All kinds of Red.	1 20 @ 1 40	1 14 @ 1 32
CORN—Yellow.	60 @ 70	56 @ 62
White.	65 @ 73	58 @ 65 1/2
Mixed.	64 @ 73	58 @ 65 1/2
OATS—Western.	34 @ 35	31 1/2 @ 32 1/2
State.	35 @ 36	32 1/2 @ 33 1/2
Southern.	30 @ 33	29 @ 31
RYE.	68 @ 69	66 @ 67 1/2
HAY, in bales, per 100 lbs.	70 @ 75	65 @ 70
COTTON—Middlings, per lb.	13 1/2 @ 13 1/2	13 1/2 @ 14 1/2
RICE, per 100 lbs.	3 50 @ 5 00	5 50 @ 6 50
HOPS, crop of 1860, per lb.	15 @ 25	14 @ 24
FRUIT, Live Geese, p. lb.	37 @ 43	None selling
SEED—Clover, per lb.	7 1/2 @ 8 1/2	8 @ 8 1/2
Timothy, per bushel.	3 00 @ 3 50	None selling
SUGAR—Brown, per lb.	4 @ 6 1/2	4 @ 6 1/2
MOLASSES, New-Orleans, p. gal.	33 @ 35	30 @ 35
COFFEE, Rio, per lb.	11 @ 14	10 1/2 @ 13 1/2
TOBACCO—Kentucky, &c. p. lb.	23 @ 13	3 @ 15
Seed Leaf, per lb.	4 @ 25	4 @ 25
WOOL—Domestic fleece, p. lb.	28 @ 55	28 @ 55
Domestic, pulled, per lb.	22 @ 40	22 @ 38
TALLOW, per lb.	9 1/2 @ 9 1/2	9 @ 9 1/2
OIL CAKE, per tun.	30 00 @ 36 00	Nominal.
PORK—New Mess, per bbl.	17 50 @ 17 75	17 25 @ 18 00
Prime, new, per bbl.	13 00 @ 15 25	14 00 @ 16 00
BEEF—Repacked mess.	8 75 @ 10 25	10 00 @ 11 00
LARD, in bbls, per lb.	9 1/2 @ 10 1/2	9 @ 9 1/2
BUTTER—Western, per lb.	10 @ 15	11 @ 15
State, per lb.	14 @ 19	13 @ 17
CHEESE.	10 @ 10	4 1/2 @ 9
EGGS—Fresh, per dozen.	13 1/2 @ 14	13 @ 14
POULTRY—Fowls, per lb.	14 @ 16	12 @ 14
Chickens, Spring, per pair.	12 @ 16	12 @ 14
Turkeys, per lb.	12 @ 16	12 @ 14
Wild Pigeons, per doz.	60 @ 65	1 00 @ 1 25
APPLES, Prime, per bbl.	1 50 @ 1 75	2 00 @ 2 50
Medium, per bbl.	1 25 @ 1 50	1 50 @ 1 75
Extra Dessert Apples.	2 00 @ 2 75	2 50 @ 3 00
Dried Apples, per lb.	2 @ 3	2 @ 3
Dried Peaches, per lb, peeled.	8 @ 13	10 @ 11
Dried Cherries, pitted, per lb.	12 @ 13	10 @ 11
Dried Raspberries, per lb.	12 @ 13	10 @ 11
POTATOES—Merchants, per bbl.	1 75 @ 2 25	2 25 @ 2 62 1/2
Nova Scotia, per bushel.	62 @ 65	75 @ 80
Dryden and Buckeye, p. bbl.	1 75 @ 2 00	1 85 @ 2 00
Peach Blows, per bbl.	1 75 @ 2 00	2 00 @ 2 25
Bermuda, new, per bush.	7 @ 10	4 @ 4 50
ONIONS, Red, per bbl.	1 75 @ 2 00	2 25 @ 2 50
TURMPS, per bbl.	50 @ 62	50 @ 63
TOMATOES, Bermuda, p. doz.	1 1/2 @ 1 50	1 25 @ 1 50
ASPARAGUS, per doz, bunches	1 1/2 @ 1 50	1 25 @ 1 50
RHUBARB, per 100 bunches.	2 00 @	2 00 @

N. Y. Live Stock Markets.—THE CATTLE

MARKETS have been well supplied with beefs during the past month, the total receipts being 16,440, or a weekly average of 4,110. The increased demand for city consumption, while so many soldiers are quartered or passing through here, with considerable purchases by country graziers, and especially the demand for army supplies at Washington, through government agents, have conspired to advance prices about 1 c. per lb. during the month. Beef Cattle now range at 9c. @ 9 1/2c. Φ lb, estimated dressed weight of the four quarters, for prime grades; 8c. @ 8 1/2c. for fair to good; 7 1/2c. @ 7 3/4c. for poor; with an average of 8 1/2c. for all sold. Appearances indicate good markets for June.

VEAL CALVES.—Receipts have been very abundant during the past month, amounting to 4,004, or 1,016 per week. There has been a glut each market day, and good calves have sold very low. It is difficult to give a regular quotation, as, after the first sales each weekly market day, prices fall, and closing rates are just what buyers choose to pay—frequently less than half what they brought in the morning. A medium quotation for prime veal calves is 5c. @ 5 1/2c. Φ lb, live weight; fair calves 4c., and thin animals 3c. @ 3 1/2c. Young calves of a few days old, called "bobs," sell for \$1 @ \$2 per head. All of this class, and many of the good ones, should be reared upon the farm, as stock of all kinds will doubtless be in better demand for a year or more to come, and at improved rates.

SHEEP AND LAMBS.—Receipts about as last month, or an average of 6,352 per week. The demand has increased, and prices advanced 1/2c. @ 3/4c. Φ lb, live weight, and all the stock was early sold at the last market, leaving a large want unsupplied. A few are taken from this city to feed the army, while large numbers which would otherwise

come here, are turned to Washington. All the sheep are now shorn, and prices ruled: May 15th, at 5c. @ 5 1/2c. Φ lb, live weight for fat stock, and 4 1/2c. for thin. Good lambs are in demand at \$4 @ \$5 per head—poor ones sell slowly.

LIVE HOGS.—Receipts were in keeping with the demand during the first half of the month, but for two weeks past we have had about 10,000, which is largely in excess of present wants, the weather being too warm to pack. At the last market prices were 4 1/2c. @ 5 1/2c. per lb. live weight, for corn fed hogs, and 4c. @ 4 1/2c. for distillery fed, or nearly 1/2c. lower than one month ago. Fully 3,000 remained unsold. The weekly receipts for 4 weeks average 8,374.

The Weather has been cold and wet of late, making the season unusually backward. Many farmers have not finished planting corn, rightly concluding that seed is as well off out of ground, as in, until the soil is warm enough for it to vegetate quickly. There have been several hard frosts, and, in some localities, fruit is doubtless injured. The very cold weather in February, suddenly following a mild term, injured the fruit buds, so that a light bloom was the result.—OUR DAILY WEATHER NOTES, condensed, read thus: April 20, to 23, clear, fine, warm—24, hot, showers at night, (Stuyvesant Pear Tree, of this city, now near 200 years old, beginning to bloom, which is the same date it opened last season)—25 to 27, clear, fine, growing weather—28, cloudy, with rain—29, 30, clear, cold—May, 1, showers, cold, windy—2, clear, cold, ice formed—3, cold, mercury 30°, and ground frozen, cherry, peach, plum and pear blooms probably injured, rained P. M.—4, cold rain, A. M.; clear P. M.—5, hard frost, rain at night—6, heavy, soaking rain—7, cool, rain squalls—8, 9, fine but cool—10, clear A. M.; cloudy P. M.; rain at night—11, cloudy—12, clear, warm—13, rain—14, cloudy A. M.; clear and warm P. M.—15, 16, clear and fine—17, 18, cool, but pleasant.

Thermometer at 6 A. M., New-York.

[Observations carefully made upon a standard Thermometer (Fahrenheit).—r indicates rain, s, snow.]

APRIL.									
1.....	34s	7.....	40	13.....	51r	19.....	49	25.....	53
2.....	32	8.....	40	14.....	49	20.....	41	26.....	52
3.....	33	9.....	36	15.....	46	21.....	45	27.....	50
4.....	32	10.....	34	16.....	40r	22.....	47	28.....	51r
5.....	38	11.....	37	17.....	35s	23.....	51	29.....	52
6.....	41	12.....	40	18.....	38r	24.....	51r	30.....	54
Average.....43									

MAY.									
1.....47r	4.....38r	7.....50	10.....47r	13.....55r					
2.....34	5.....39	8.....54	11.....46	14.....54r					
3.....36r	6.....44r	9.....47	12.....50	15.....55					

Our Exhibition Tables.

As announced some months since, when taking possession of our new office, we have conveniently arranged tables for the exhibition of agricultural and horticultural novelties, specimens of flowers, fruits, etc. These have been a very attractive feature of the establishment, and have been visited by thousands. Our location being on one of the great thoroughfares in this City, no better point can be found for such purposes, and we invite all who choose to avail themselves of the privilege, to do so freely. Visitors will also usually find enough to repay them for a call. The Winter and early Spring months do not afford much in the way of flowers, but as the season advances, there will be a good show of fruit and flowers, from nurseries, private individuals, and from the grounds of the proprietor. Since the last list published, the following articles, not noticed before, have been received.

California Wheat, exhibited by Alexander W. Mabee, Rockland Co., N. Y. Union Corn—A curious specimen of two ears of pop-corn united in one; Wm. B. Westcott, New-York City Chili Potatoes; E. B. Spooner, Kings Co., N. Y., and Wm. Bigelow, Hartford Co., Conn. Prince Albert and Peach Blow Potatoes, fine specimens; G. Williams, Essex Co., N. J. Long White French Turnip, by the same. Northern Spy, Baldwin, English Russet, Rambo, and Talman Sweetening apples; George A. Wilson, Madison Co., N. Y. Forwelder Apples; A. Lydecker, Englewood, N. J. Algaus Squash, imported from Algoa Bay, West Coast of Africa; W. S. Carpenter, New-York. Manzanneta stems and flowers; Phikp Reiz, Corvallis, Oregon. Variegated plants, Caladiums and Coleus, also fine Lycopodium; S. B. Parsons & Co., Queens Co., N. Y. Century Plant (*Agave Americana*), about 30 years old, noticed on page 181; D. Bidwell, New-Orleans, La. Brazilian Ivory Nuts; Wm. B. Westcott, New-York City. A pair of fine Grey Eagles, presented to the proprietor by P. T. Barnum. Star Mole, a mischievous little animal, with a singular star shaped formation at the end of the nose; C. E. Wheeler, Essex Co., N. J. Hand Glasses for protecting garden plants; W. V. Bloor, Kings Co., N. Y. Hog-Catcher, a simple and effective implement for taking and holding swine; Jacob Sherwood, Westchester Co., N. Y.



Fig. 1—"GIANT WHEAT."

The above engraving, prepared for our March number, is an exact copy of one appearing in the English journals. Almost incredible accounts of productiveness of this Wheat were given, and we sent to our English correspondent to procure a quantity and forward for our distribution. Two bushels were obtained at a fabulous price, and we have been distributing it in small parcels for experiment. We should have sent the whole of it away, had we known just how many parcels would be called for, and how much could be put in each. The little now remaining we shall distribute, with another variety described below, as premiums. We do not credit the half that is said of this wheat, though the accounts are given in a leading agricultural journal, published where the wheat is grown, and where they might be easily exposed, if unreliable. But if this wheat prove a fourth part as valuable here as it is represented to be in England, it will be decidedly worthy of cultivation. The experiment will cost but little, and is worth a trial. If successful, those who raise the first seed in quantity will be ahead in this market.



Fig. 2—"HALLETT'S PEDIGREE NURSERY WHEAT."

We present in Fig. 3 a fac simile of an engraving of another variety of wheat, which was brought before the public in England, last Autumn. This engraving was placed beside a glass case of the heads, at the Show of the Smithfield Club, last year, and the public invited to compare them, and no one disputed the accuracy of the representation. Mr. Hallett states that a single kernel planted, produced 39 heads, containing 2145 kernels. As soon as we saw the statements concerning this Wheat, we at once sent for a quantity of it to add to our free Seed Distribution, notwithstanding the enormous price asked for it, but our Correspondent could only get a small lot. There was not enough to offer in the general distribution, and it was too costly for that purpose. We shall, therefore, reserve a little for our own experiment, and offer the rest that we have as a special premium, as named below. We can only say of this, as we have said of the "Giant Wheat," above, that the claims put forth for it are too large to fully credit; though it would seem to be of unusual value, and it will cost little to test it here. Mr. Hallett claims to have "bred up" this wheat from the size shown in Fig. 3, by careful selections from year to year. Those who obtain the specimens of this, or the giant wheat, or both, will do well to plant the kernels separately, in drills, in a good soil, to the end that as large a yield as possible may be secured, should these varieties prove worthy of future cultivation. Plant or sow at the usual time of putting in Winter wheat.



Fig. 3.—AN ORIGINAL HEAD.

THE WHEAT PREMIUM.

To any one who will now procure and forward a new subscriber to the *Agriculturist*, at \$1 a year, we will send (post-paid,) a parcel of each of the above varieties of wheat—one parcel to contain, say about 400 kernels of the "GIANT WHEAT," and the other about 600 kernels of HALLETT'S PEDIGREE NEW WHEAT. This amount of seed (1000 kernels,) will produce a large supply for another year.

TURNIP SEED PREMIUM.

As this is the season for procuring turnip seed, and it is important to raise as many as possible this year, we offer a Special Premium of some excellent turnip seed, which will be particularly valuable to those who can not get a supply of good seed more conveniently or cheaper.

To any one who will now procure and send a new subscriber for the *American Agriculturist*, at \$1 a

year, we will present a QUARTER OF A POUND of the BEST TURNIP SEED. The seed will be forwarded free of charge, (post paid). This amount of seed will suffice to plant from one-fourth to one half of an acre, according to the care exercised in sowing.

For other Premiums, see last page of this number; also page 186.

TWO CONVENIENT PAPER FILES.

We have now procured a supply of two excellent paper files, made expressly to fit the *Agriculturist*, for the convenience of our subscribers who desire to preserve the successive numbers of this journal in regular order and ready for reference.

The first, and most perfect, is the Portfolio Cover, resembling a neat book cover, provided with cord, needle, and India rubber spring, by means of which the numbers are quickly fastened in, almost as firmly as if full bound. The covers are stamped, and have the name of the paper printed on. When one volume is complete, the numbers can be stitched together in a volume, and the cover used

for the next volume. It is the perfection of a newspaper file, combining the advantages of an adjustable file, and a bound cover. Prices, 60 cents, 75 cents, and \$1, according to the material, style, etc. If sent by mail, 21 cents extra for postage.

The second, is a convenient cheap wood file, which clasps the papers at the back, holding them about as firmly as if stitched together. This is the most convenient and perfect newspaper file, for its price, that has yet been invented. We have them made just to fit a volume of this journal. Price 15 cents. If sent by mail, 12 cents extra for postage.

BAROMETER PREMIUM EXTRA.

The Barometer is very useful for the Haying and Harvesting season, to assist in foretelling the approach of storms. The one offered in our Standing Premiums, (page 186,) will be given for this month, (June,) and for this month only, on the same terms as the Large Dictionary, viz: for 10 new subscribers now sent in at \$1 each—good money. The instrument is well packed for being carried anywhere with entire safety, by Express, or otherwise.

Close of the Seed Distribution.

Our general distribution of seeds for the present year is about closed—save a few kinds offered as special premiums. During most of the time since the beginning of the year, we have had from five to ten persons employed in putting up and mailing seeds to scores of thousands of subscribers residing all over the country. At the outset, we provided a supply of 77 different varieties, as far as possible in the proportions we judged they would be called for. Some kinds were rapidly exhausted, whilst others have been little asked for. Owing to the bad season last year, and the scarcity of good seeds, the expense has been greater than expected, and the parcels necessarily smaller than we could have desired.

We trust all the seeds sent out will grow and give satisfaction, pleasure, and ultimately profit to the recipients; though among so many, there must doubtless be some failures, owing to lack of proper soil or culture. The cold wet weather of May has probably rotted some of them in the ground. So also, we can hardly venture the hope that there have been no mistakes in the selection and putting up of the exact kinds asked for, though no effort or care has been spared to avoid errors from this cause. The mail has probably miscarried an occasional parcel, but we have heard very few complaints of any kind.

The plans for the future are not yet fully matured. We are growing a larger variety and in greater quantity than hitherto; and the great reduction in postage will render next year's distribution far more important and valuable.

More Agricultural Humbug at Washington.

We exceedingly regret to learn that the present Administration at Washington has commissioned a wholly incompetent person to proceed to Europe to study various plants, purchase seeds, &c. The thousands of dollars expense involved will be a small matter, in comparison with the unreliable information that will be sent forth, and the loss entailed upon those who receive these seeds, and expend their time in cultivating them.

If such incompetent men are to buy seeds for the Government, we advise our readers not to be at the trouble and expense of cultivating or even trying seeds received from Washington hereafter. Our new Administration must make a better beginning in the appointment of agents, if it would redeem the Agricultural Department at Washington from the low estimation into which it has sunk for several years past.—We shall have more to say on the subject.

SPECIAL EDITION For the PACIFIC COAST.

An Extra Early Edition of the *American Agriculturist*, for subscribers in California, Oregon, Washington Territory, and the Sandwich Islands, is regularly issued on the evening of the 20th of each month, to go by the mail Steamer leaving N. Y., on the morning of the 21st.

Extra Time on Extra Premiums To Distant Subscribers.

The Special Premiums on page 192, and the Barometer Premium, page 188, close July 1st; but sufficient extra time will be allowed to subscribers on the Pacific Coast, and at other distant points, to send in for these premiums, after they receive this June number.

Postage Reduced on Seeds and Cuttings.

We are happy to announce to our subscribers, that the postage on all kinds of seeds, and on cuttings, or clones, is now reduced from 6 cents, to 1 cent per ounce, when sent less than 1500 miles, and from 20 cents, to only 2 cents per ounce on all distances over 1500 miles. This will greatly facilitate our sending seeds to distant subscribers hereafter.

Beyond all doubt or controversy, the circulation of the *American Agriculturist* to regular subscribers, is many thousands greater than that of any other Agricultural or Horticultural Journal in the World, no matter what its character, or time or place of issue. The publisher is ready at any and all times to substantiate this statement.

Advertisements.

Advertisements to be sure of insertion must be received at latest by the 15th of the preceding month.

TERMS—(Invariably cash before insertion):

FOR THE ENGLISH EDITION ONLY.
Fifty cents per line of space for each insertion.
One whole column (45 lines), or more, \$50 per column.

Business Notices, Eighty cents per line of space.

FOR THE GERMAN EDITION ONLY.
Ten cents per line of space for each insertion.
One whole column (130 lines), or more, \$10 per column.

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Fifty five cents per line: \$55 per column.

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Such as Flour, Butter, Cheese, Lard, Provisions of all kinds, Grain, Eggs, Poultry, Game, &c. &c.

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SUCCESSOR TO THE FIRM OF HAIGHT & EMENS.
Refers to the Editor *American Agriculturist*.

E. R. Cooper, Cashier, Market Bank, New-York.

Strawberries! Strawberries!

"By their fruits ye shall know them."

What Strawberry shall I plant? Why! the Wilson's Albany.—Why? Because it is the most productive, the largest, and finest berry out. In fact it is the "fashionable" berry.

Originated at the Albany Nursery, where plants can be procured by addressing JOHN WILSON, Albany, N. Y.

Price per 100 plants.....\$1

do. 1000 do.....\$5

Liberal discount to the trade.

BUCKEYE MOWER

With Flexible Folding Bar.

Farmers wishing to secure a Buckeye Mower must send in their orders at once, as the number of orders already received is so large that the subscribers fear that their utmost manufacturing facilities will not enable them to meet the demand.

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ALLEN'S CELEBRATED NEW TWO WHEEL MOWING MACHINES, with Steel Finger Board and Steeled Fingers.

Having had great experience for many years in the manufacture, sale, and working of these machines, and possessing several of the most valuable patents which embrace all late desirable improvements, I offer the following as the most desirable list of Harvesters to be had in this country.

POWELL FIELD MOWER for one or two
Horses, with two drive wheels and folding
steel finger board. \$70 to \$100

TWO HORSE FIELD MOWERS \$110 to \$130

COMBINED MOWERS AND REAPERS \$120 to \$135

Large 4 ft. drive wheel Reapers cut six feet. \$150 to \$160

LAWN MOWERS of different kinds. \$45 to \$160

Price according to size and form.

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HOWARD'S NEW MOWER.

Price Reduced for 1861.

The cheapest, most durable, and lightest draft Mower offered for sale. Four sizes, \$70, \$85, and \$100 each, all are warranted—can give the testimonials of those who have used them if desired. Send for circular giving full description.

KETCHUM'S COMBINED MACHINE, IMPROVED,

price, as usual, \$130. Improvements of guards, shoe with roller, and lever with roller and extras, for the Ketchum Machine, furnished at moderate prices, by giving the number of the machine for which they are wanted. Address

R. L. HOWARD, Buffalo, N. Y.

ENDLESS CHAIN HORSE POWERS, THRESHERS, SEPARATORS, and CLEANERS. SAW-MILLS and SAWS, the best in THE WORLD, WAR- RANTED TO GIVE SATISFACTION.

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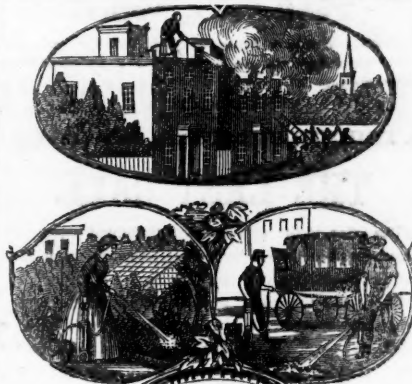
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